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AUTHORITY

SAMSO ltr 26 Feb 1972







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GENERAL DYNAMICS
ASTRONAUTICS

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in 200 cm on the distributed thing to add to

MERCURY

TEST SUMMARY

FOR

MAJOR CRITICAL COMPONENTS

AIRBORNE EQUIPMENT

AE61-0512-9

1 February 1962

GENERAL DYNAMICS/ASTRONAUTICS

PREPARED BY SYSTEMS ENGINEERING

GEHERAL DYNAMICS

FEB 14 1962

LIRRARY

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J. E. Endicott	335-20	J. Lieb/W. Discher	556-10
G. L. Armstrong	510-00	R. G. Camp, Jr.	367-10
P. E. Culbertson	510-40	W. G. Hardy	565-10
0. C. Priest	522-30	K. E. Newton (AMR)	571-1
G. L. Hansen	530-00	C. C. Campbell	146-50
Systems Engineering (20)	531-30	J. B. Nelson	145-80
R. I. Kreisler/		W. B. Otto	146-10
J. Luster	535-30	A. H. Lakritz	146-50
W. R. Buevens	535-50	V. L. Hettinger	567-60
R. H. Nicholson/AMR/(2)	571-40	H. H. Mishler	342-10
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REFERENCES

(a) AFMBO letter MCPTC:JMP:law, PRO 13, dated 29 January 1958, Subject: "Contract AFO4(645)-4. Environmental Requirements and Test Procedures for WS 107A-1 Equipments. Convair Specification 7-00210 dated 15 October 1957"

W

- (b) Convair letter MR:0CP:emp, 531-3015, dated 22 November 1957. Subject: "Contract AF04(645)-4, Environmental Testing of Convair Furnished Equipment"
- (c) Convair Specification 7-00209B, dated 1 March 1958, Addendum I, dated 5 January 1961, "Environmental Design Conditions and Environmental Test Procedures for WS 107A-1 Equipments"
- (d) Convair Specification 7-00210B, dated 1 May 1958, "Environ-mental Requirements and Test Procedures for WS 107A-1 Equipments"
- (e) Contract AF04(647)-699, CCN 70; Sales Order 89-1-71.
- (f) Contract AF04(647)-635, CCN 85; Sales Order 92-1-79.
- (g) Contract AF04(647)-299, CCN 721; Sales Order 11-1-577.
- (h) AZR-27-001, Test Status Report.

1.0 OBJECTIVE

J

This report presents the qualification or approval status of major critical components on the Mercury portion of WS107A-1. All components are operating, non-standard, airborne CFE components.

This report is submitted in compliance with:

S.O. 11-1-577, CCN 721 of contract AFO4(647)-299

S.O. 92-1-79, CCN 85 of contract AF04(647)-635

S.O. 89-1-71, CCN 70 of contract AF04(647)-699

There are 148 major critical components included in this report. One hundred-thirty-nine (139) are subject to qualification testing. The test statuses of components subject to test are:

Qualified by:

PPT	42
FPT	8
BOS	56
Other	
SFCW	1
Evaluation tests (Modified commercial parts)	7
Similarity to qualified unit	8,
plus additional tests	15
Validation tests	5
Total	134

To be Qualified by:

PPT	4	•
FPT	O)
BOS	2	•
Other		
Similarity to	qualified units.	

Similarity to qualified units, plus additional tests

O

Total

4

Not to be used:

Rejected for missile use
(Design not acceptable)

Additional testing required

Total

O

Total 139

2.1 No additional types of components were added in this issue.

3.0 CODING

Column entries in the summary sheets reflect pertinent information as described in paragraph 3.1 through paragraph 3.8.

3.1 PART NUMBER Column

Part numbers, specification numbers, and vendors name are listed in the order indicated in the column heading. If a number is not applicable or a number has not been assigned, dashes will be entered to indicate such omission and maintain descending continuity.

3.2 EFFECTIVITY Column

The effectivity of the listed part is indicated by the manufacturing sequence numbers for Mercury boosters.

3.3 NOMENCLATURE Column

Nomenclature will be that appearing on the contractor's release records or drawings.

A QCDI entry in the lower part of the column indicates the item is listed in the current issue of Departmental Instruction 141-0-92, Quality Assurance Provisions Mercury Pilot Safety Program.

3.4 MAD APPR Columns

Current CCN's do not require these entries and the entries are deleted. Column headings are deleted from the revised form. When significant changes are made on a page, the revised form will be utilized.

3.5 CRIT COMP Column

This entry is replaced by a QCDI entry in the NOMENCLATURE column. (Refer to paragraph 3.3.) The column heading is deleted from the revised form. When significant changes are made on a page, the revised form will be used.

3.6 QUAL BY Column

Entries in the QUAL BY column indicate the method by which the item is qualified. A "PPT" entry indicates that the item was or will be qualified by preproduction tests in accordance with Convair Specification 7-00209B. A "BOS" entry indicates that the item was or will be qualified on the basis of similarity to a previously-qualified item. An "FPT" entry indicates that the item was or will be flight proof tested in accordance with Convair Specification 7-00210B. An "OTH" entry indicates that the item was or will be qualified by means other than those given above.

3.7 TEST SCHED Column

Column entries indicate requirements for test schedules; they do not indicate requirements for testing. "Date" entries in the column indicate time spans for the test schedules. "Completed" entries indicate the test schedules are complete. "Not required" entries indicate schedules are not required; the entries do not indicate tests are not required since qualification may be domonstrated by similarity to previously qualified items or by another manner of qualification.

87

3.8 REVISION/ADDITION CODING

A horizontal bar inside the lower margin of a page indicates the page is new or revised for the current issue of the report. See example at bottom of this page.

PAGE___3-2

MERCURY

MAJOR CRITICAL COMPONENTS

HYDRAULICS

There are 30 major critical components included in this section. Seventeen units were preproduction tested, one unit is not for missile use, and ten units were approved based on similarity to preproduction tested units and nine of the ten received some additional testing. Two other units will also be approved based on similarity to preproduction tested units, but still require some additional testing.

The 27-08573-1 actuator cylinder manufactured by the Bohanan company will not be used on any missiles because of inherent structural weaknesses. The actuator was included in the basic issue of this report in compliance with references e, f, and g.

The 27-08573-3 and 27-08574-801 vernier servo cylinders, manufactured by Clemco, have successfully passed PET tesus and are considered by the Design Group to be satisfactory for flight use.

Relief-valve 27-08569-1, manufactured to original material design requirements of 17 Ph poppet and 52-100 chrome sleeve, successfully passed PET's. Prior to these tests, this unit was experiencing scoring and unstable operation, however, the problem has apparently been resolved. Similar scoring problems were experienced on the 27-08561-1 relief valve as above; however, it was determined thru tests that chrome plating the poppet will eliminate the scoring problem. This unit has also successfully passed recent PET's.

		<u> </u>	4 0				 -	
	T G L E	comple te	June 1959					
	4. 4 4. 4	Complete						and the state of t
		2	- 18					pubricy management
HYDRAULICS		(12-61)	Approved based on similarity to 27-08550-1, which was preproduction tested and reported in Moog Report No. MR-322. The 27-08550-5 was approved on VAF MC 29093 dated 6-26-59.	NOTE	l. This unit reworked to a 27-87066-1 servo cylinder by service action which replaced the integral filter and servo walve orifice plate.	2. This unit is not to be used on Mercury vehicles.		
	QUALIFIED BY	BOS						
		NOMENCLATURE Servo Cvlinder -	Booster Hydraul					
SUMMARY	FFECTIVITY	100D	Only					
MERCURY TEST SUM		VENDOR P/N 27-08550-5	27-08550J 27-04202K Moog Valve M-7773					

A2487 (REV 11 - 61)

4

	m	COMPL	sept			
	TEST SCHEDULE	START CO	Complete Se 19			
HYDRAULICS		REMARKS	Approved based on similarity to the 27-08550-1, which was preproduction tested, and by additional testing as required, Additional testing and TAST6.	The basic differences between the -7 and the -1 are minor bleed port changes and a rod-end locking device which was functionally evaluated and tested in the -7 cylinder.	Specification was revised to K revision. Difference between K revision and the basic specification required additional calibration testing on the transducer which is a sub- component of the cylinder assembly.	GD/A design group approved PPT on VAF MC 36974, dated 9-8-59.
	UALIFIED BY	סו	0 t p			
		MOMENCLATURE	Servo Cylinder - Booster Hydraulic			QCDI
IARY	EFFECTIVITY		77D 88D 93D 103D 107D 109D	130D 144D 152D 167D		
MERCURY TEST SUBMARY	SPEC CONTROL PROC SPEC VENDOR RAME	04	27-08550-7 27-08550K 27-04202K Hydraulic Research Mfg. 104700-1			

MERCURY TEST SUM	SUMMARY			HYDRAULICS	
PART MUMBER SPEC CONTROL PROC SPEC VENDOR NAME VENDOR P/M	FFECTIVITY	MOMENCLATURE	DOVEIFIED BY		TEST SCHEDULE START COMPL
27-08551-3 27-08551G 27-08503C BenBow-Pantex 8985	88D 83D 100D 103D 107D 113D 113D 152D 167D	Tenk Fluid Type	Į. dd	Three units S/N 1, S/N 2, and S/N 3 were preproduction tested. Results were reported in Wyle Lab Test Report 5840, Addendums I, II, and III. GD/A design group approved PPT on 27-08551-3 in VAF MC 21925, dated 10-31-58.	Complete Dct.
		QCDI			

 Γ

	TEST	LOBPL	March 1960	
	SCAE	START	Complete 1964	
HYDRAULICS		REMARKS	Two units were preproduction tested to 27-08504C Specification. Results were reported in Wyle Labs Test Report 8188 Addendum I. GD/A design group approved PPT on 27-08552-5 in VAF 45313, dated 3-7-60.	
	VALIFIED BY	0	<u>E</u>	
		NOMENCLATURE	Tank - Hydraulic Fluid, Sustainer, Type II	
SUBBARY	EFFECTIVITY		93D 93D 100D 103D 103D 113D 152D 167D	
MERCURY TEST SUM	PART NUMBER SPEC CONTROL PROC SPEC VEND OR NAME	VENDOR P/N	27-08552H 27-08552H 27-08504C BenBow-Pantex 8983E	

MERCURY TEST SU	SUMMARY			HYDRAULICS	
PART MUMBER SPEC CONTROL PROC SPEC VENDOR MAME	EFFECTIVITY		DUALIFIED BY		ν <u>-</u>
I M G	88D 83D 100D 103D 103D 113D 113D 113D 115D 167D	Accust Hydrau	FIG	(5-61) Two units S/N IX and S/N 2X were preproduction tested by the Wyle Labs. The PPT data and additional test requirements were included in Wyle Lab reports 5845, Addendums I, II, and III. GD/A design group approved PPT in VAFS 45857 and 27813, dated 2-23-60. NOTE Unit is being investigated for possible redesign action to prevent leakage past the piston.	Complete March 1959
		QCDI			

A2497 (REV 11 - 61)

MERCURY TEST SU	SUMMARY			HYDRAULICS	
PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME VENDOR P/N	EFFECTIVITY	NOMENCLATURE	DUALIFIED BY	A M M M M M M M M M M M M M M M M M M M	TEST SCHEDULE START COMPL
27-08554-3 27-08566D Peacock Engineering 51310-3	980 930 1000 1030 1070 1030 1300 1300 1520 1670	Accumulator - Hydraulic, Booster	PPT	Two units S/N X1 and S/N X2 were preproduction tested by the Wyle Labs. The PPT data is recorded in report 5844, Addendum II, dated 8-26-58, and report 5844, Addendum III, dated 3-18-59. GD/A design approved PPT in VAF MC 27885, dated 2-24-59. I. Unit has an in-service history of precharge gas pressure leakage pest the piston and into the hydraulic system. 2. Unit is being investigated for possible redesign action to prevent this leakage in future installations.	Complete March 1959
		QCDI			

4-7

MERCURY TEST SU	SUMMARY			HYDRAULICS		
	FFECTIVITY		VEIETED BY		TEST	TEST SCHEDULE
VENDOR P/K	3	MOMENCLATURE	מח	REMARKS	START	COMPL
27-08555-1 27-08555D 27-08511A Peacock Engineering 51285-1	950 950 1000 1030 1070 1090	Coupling Assembly - Staging, Hydraulic Return	PP	and S/N 2 was Specific Test Lab M d 9-26-58 a and III.	Compl	oct. 1958
	130D 130D 144D 152D 167D			PPT was approved on VAF MC 21559, dated 10-23-58. Specification was revised to A revision. Ladiffers from the basic specification in that the		
				L. O		
				Unit is mounted on the booster section, and used for sustainer hydraulic system.		
		Ідэв				

	C	
		ı
	₹	

	SCHEDULE START COMPL	Compl	
HYDRAULIC	REMARKS	Two units were preproduction tested to 27-08511A specification. Results were reported in Wyle Test Report 5841, Addendums I, II, and III. GD/A design group approved PPT of 27-08555-3 in VAF MC 21560, dated 10-23-58. Specification was revised to B and C revisions. They differ from the A revision in that B and C revisions incorporate maximum weight of the valve and a revised procedure for proof cycle test. These revisions have been tested in later PET's of this unit. Unit is mounted on the sustainer section and is used for the sustainer hydraulic system.	
	DUALIFIED BY	FP	
	NOMENCLATURE	Coupling Assembly - Staging, Hydraulic Return	QCDI
SUMMARY	YTIVITO3333	93D 93D 100D 103D 103D 113D 113D 152D 167D	
MERCURY TEST SUM	PART MUMBER SPEC CONTROL PROC SPEC VENDOR NAME VENDOR P/N	27-08555D 27-08511C Peacock Engineering 51285-3	

	11. 10.LE	COMPL	oct.	1958					
	TEST	START COMPL	Complete						
HYDRAULICS		REMARKS	(6-61) Two units S/N 1 and S/N 2 were preproduction	tested to 27-08511A specification. Results were reported in Wyle Test Report 5842, Addendums I, II, and III.	GD/A design group approved PPT on 27-08556-3 in VAF 21562, dated 10-23-58.	Specification was revised to B and C revisions. They differ from the A revision in that B and C incorporate maximum weight of the valve and a revised procedure for proof cycle test. These revisions have been tested in later PET's of this unit.	Unit is mounted on the sustainer section and is used for the sustainer hydraulic system.		
	UALIFIED BY	0	PPT						
		NOMENCLATURE	Coupling Assembly - Staging, Hydraulic	Pressure				ocb1	
SUMMARY	YT1V1T03343		77D 88D	93D 100D 103D 107D	109D 113D 130D	144D 152D 167D			
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	VENDOR P/N	27-08556-3 27-08556D	27-08511C Peacock Engineering 51290-3					

A2497 (REV 11 - 61)

MERCURY TEST SU	SUMMARY			HYDRAULICS	
PART MUMBER SPEC CONTROL PROC SPEC VENDOR NAME VENDOR P/M	EFFECTIVITY	NOMENCLATURE	DUALIFIED BY	REMARKS	TEST SCHEDULE START COMPL
27-08556-5 27-08556D 27-08511C Peacock Engineering	77D 88D 93D 100D 103D	Coupling Assembly - Staging, Hydraulic Pressure	0 th	(6-61) (10-61) Approved based on similarity to the -1 and the -3, which were preproduction tested to specification 27-08511A, and by additional tests as required. Results were reported in Wyle lab report	Complete March
6-06-76	109D 113D 130D 144D 152D			liffers from the -l in that a check ninated from the -5 valve to make i with the system. This coupling re 18566-1 coupling.	-
	167D			$\mathtt{GD/A}$ design group approved the 27-08556-5 in VAF MC 43858, dated 3-4-60.	
				Specification was revised to B and C revisions. They differ from the A revision in that B and C incorporate maximum weight of the valve and a revised procedure for proof cycle test. These revisions have been tested in later PET's of this unit.	
				Unit is mounted on the booster section and is used for the sustainer hydraulic system.	
		QCDI	-		

3 ER 4 TROL 7 TROL 7 T AMME 18 P/N 7 88D 7 93D				
-1 77D 88D C 93D		DUALIFIED BY		
	Coupling Assembly - Rise-Off, Hydraulic Return	स्व	(6-61) (10-61) The unit was preproduction tested to revision A of the specification. Results were reported in in TR 5872. GD/A design group approved the unit on VAF 21967, dated 11-1-58. Specification was revised to C revision. The C revision differs from the A revision in that the weight of the unit was increased to reflect the actual unit and several other (minor) changes not affecting design or test requirements. This unit passed search-for-critical-weakness tests on 4-9-59 and PET's on 5-3-60. Unit is mounted on the launcher and is used for the booster hydraulic system.	Complete Nov. 1958
	QCDI			

	ST	COMPL	1959 1959	
	TEST	START	Complete Au	
HYDRAULICS		REMARKS	The coupling was preproduction tested to specification 27-08510A and the results were reported in TR 194 on test specimens S/N 002 and S/N 003. GD/A design group approved the testing on VAF MC 35157, dated 7-22-59. Specification was revised to C revision. The C revision differs from the A revision in that the weight of the unit was increased to reflect the actual unit and several other (minor) changes not affecting design or test requirements. Unit is mounted on the booster and is used for the booster hydraulic section. This unit passed search-for-critical-weakness test on 4-9-59 and PET on 4-13-60.	
	DUALIFIED BY		£ .	
		MORENCLATURE	Coupling Assembly - Rise-Off, Hydraulic Return	qcdi
SUMMARY	EFFECTIVITY		93D 93D 100D 103D 103D 113D 113D 152D 167D	
MERCURY TEST SUM		VENDOR P/ M	27-08557-3 27-08557 27-08510C Peacock Engineering 51295-3	

,

	T ULE	COMPL	Dec. 1958	
	TEST	START	Composition of the composition o	
HYDRAULICS		REMARKS	unit was unit was 27-085 rt 587 rt of all unit of all units of all uni	This unit passed search-for-critical-weakhess test on 3-9-61 and PET on 5-3-60. Unit is mounted on the launcher and is used for the booster hydraulic system.
	YO O31711AL	מו	E a	
		NOMENCLATURE	Coupling Assembly - Rise-Off, Hydraulic Pressure	QCDI
SUMMARY	YTIVIT3343	3	77D 88D 93D 100D 103D 103D 113D 113D 152D 167D	
MERCURY TEST SUM	PART MUEBER SPEC CONTROL PROC SPEC VENCOR MARE		27-08558-1 27-08558 27-08510C Peacock Engineering 51300-1	

I.	TEST SCHEDULE START COMPL	Dec. 1958	
HYDRAULICS	REMARKS	The unit was preproduction tested to specification 27-04510A. The data is presented in test report 5873, Addendum III. GD/A design group approved the unit on VAF's 23795 and 23796, dated 12-10-58. Specification was revised to C revision. The C revision differs from the A revision in that the weight of the unit was increased to reflect the actual unit and several other (minor) changes not affecting design or test requirements. This unit passed search-for-critical-weakness tests on 4-9-59 and PET on 10-19-60. Unit is mounted on the booster section and is used for the sustainer hydraulic system.	
	DUALIFIED BY	FP	
	NOMENCLATURE	Coupling Assembly - Rise-Off, Hydraulic Pressure	QCDI
SUMMARY	YTIVITO3443	77D 88D 93D 100D 103D 103D 113D 130D 144D 152D 167D	
MERCURY TEST SUM	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME VENDOR P/M	27-08558-3 27-08510C Peacock Engineering 51300-3	

4-15

01-1	TEST SCHEDULE START COMPL	Complete Oct. 1959	
HYDRAULICS	REMARKS	This item was preproduction tested and results were reported in Vinson test report QTR 80282, Addendum I, and Garwood Lab Report 1588. GD/A design group approved the 27-08561-1 valve in VAF 39330, dated 10-21-59. This unit has recently passed PET's using a chrome plated poppet.	
	DOYFIEIED BA	E C C C C C C C C C C C C C C C C C C C	
	NOMENCLATURE	Valve - Safety, Hydraulic Relief, Booster .	
SUMMARY	TIVIT23443	93D 93D 100D 103D 103D 113D 113D 152D 167D	
MERCURY TEST SU	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME VENDOR P/W	27-08561-1 27-08561D 27-08501B Vinson A-80282	

HYDRAULICS	
	DUALIFIED BY
SUMMARY	EFFECTIVITY

MERCURY TEST

SPEC CONTROL PROC SPEC PART NUMBER

SCHEDULE

r - Hydraulic, Other (6-61) (10-61)	Cylinder - Hydraulic,	Cylinder - Hydraulic,
-, -		27-08563F 88D Sustaine 27-08563F 88D Sustaine 27-08516D 93D Interstate 100D Engineering and 103D

The 27-08563-3 cylinder differs from the	
.08563-3 c	ses hi-
temperature 0-rings and the diameter of the	Je.
piston orifice is larger.	

109D 1130 130D

2425-103 Clemco

107D

144D 152D 167D

ness tests on 12-9-59. PET tests were completed The 27-08563-3 passed search-for-critical-weakin February 1960 and included temperature, vibration, life, and burst tests to specification 27-08516D requirements. GD/A design group approved the 27-08563-3 sperification 27-08516 on VAF MC 23585 dated 12-6-58.

The additional tests are the same as those shown under 27-08563-5, except that PET's on the -3 were completed in February 1960. 4-17

	T ULE	COMPL	Dec.				
	TEST	START	Complete De				
HYDRAULICS		REMARKS	(10-61) The cylinder was approved based on similarity to 7-08286, which was preproduction tested. The test results were reported in Wyle Lab report 4547, Addendum A.	Cylinder 27-08563-5 differs from the 7-08286 in that the 27-08563-5 has a larger diameter piston orifice and uses hi-temperature 0-rings.	The 27-08563-5 passed search-for-critical-weak-ness tests on 9 December 1959. PET tests were completed in April 1961 and included temperature, vibration, life, and burst tests to specification 27-08516D requirements.	GD/A design group approved the 27-08563-5 on VAF 23585 on 12-12-59.	
	VA GEIFIED BY	סו	Oth				
		NOMENCLATURE	Cylinder - Hydraulic, Sustainer Pitch				QCDI
IARY	EFFECTIVITY	3	93D 93D 100D 103D 103D 103D 113D 130D 152D 167D				
MERCURY TEST SUMMARY	PART NUMBER SPEC CONTROL PROC SPEC VENDOR MARE		27-08563-5 27-08563F 27-08516D Interstate Engineering and Clemco	2725-1			

HYDRAULICS preproduction tested and the in test report 2417A. oup approved the filter tests and MC 55425, dated 9-12-60. as in-line pressure filter focylinders. NOTE 64-5 filter was tested to of specification; an test, bubble coefficient, onducted to satisfy the D		TEST SCHEDULE START COMPL	test Sept.
	HYDRAULICS	REMARKS	er was preproduction tested and the sented in test report 2417A. ign group approved the filter tests 32493 and MC 55425, dated 9-12-60. S used as in-line pressure filter fo servo cylinders. NOTE 27-08564-5 filter was tested to vision of specification; an tional test, bubble coefficient, eing conducted to satisfy the D sion.
		NOMENCLATURE	Filter - Fluid, Pressure, Hydraulic
Filter - Fluid, Pressure, Hydraulic	SUMMARY	EFFECTIVITY	77D 88D 93D 100D 103D 107D 113D 130D 152D 167D
NOWE NOWE	MERCURY TEST SU	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME VENDOR P/M	27-08564-5 27-08512D 64987 Purolator Products

	SCHEDULE	Complete May 1961			
HYDRAULICS		ed on similarity to were preproduction ests presented in fers from the -5 and 03 uses a weldable filter instead of the 801. the 27-08564-803, VAF 27-08564-803 on the specifi- on the sustainer servo treferences ECP 529 ement of the 803 filter, which is 803 filter, which is ence: therefore it d lood effectivity			
	QUALIFIED 8Y	Other Coop In Contract Contrac			
		Filter - Fluid, Hydraulic System, Missileborne			
SUMMARY	YTIVITO3443	103D F 107D H 109D N 113D 133D 144D 152D 167D			
MERCURY TEST SU	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	27-08564-803 27-08564A 27-08512D Purolator Products 64988-1			

	ST	May 1961	
	TEST	Complete 19	
HYDRAULICS		Approved based on similarity to 7-08207 which was preproduction tested to specification 7-082070, per Vickers test order 13302, dated 2-8-57 and 13302-1, dated 6-4-57. Similarity was approved in VAF 5435, MC 20198 on 9-20-58, LA-001, 5-25-61. Difference between 7-08207 and 27-08566-1 is an o-ring change for high temperature, and inlet and outlet port changes to agree to D system requirements. Difference between the 7-08207D specification and 27-08505B specification calls for improved quality testing with special emphasis on degree of cleanliness for GD/A requirements.	
	DUALIFIED 8Y	BOS	
		Pump - Hydraulic, Booster	
SUMMARY	VTIVITO3943	77D 88D 93D 100D 103D 107D 113D 130D 144D 152D 167D	
MERCURY TEST SUM	PART MURBER SPEC CONTROL PROC SPEC VENDOR NAME		

PREC CONTROL FEET FEET	MERCURY TEST S	SUMMARY			HYDRAULICS	
77D Valve-Safety, Relief, PPT (6-61) (10-61) 88D Hydraulic Two relief valves were preproduction tested. 1000 1000 1000 1000 1000 1000 The tests were conducted as required by the unit propert QTR 61071, dated 9-15-60 and Garwood labs 1885, dated 8-8-60. The tests were conducted as required by the unit propert great specification 27-08501. 1300 GD/A design group approved the 27-08509-1 valve on VAF LA-001 and LA-002 on 8-30-61/Vinson Annifacturing report QTR 61071, Addendums 1, II, and III. NOTE 1. PET tests of this unit, manufactured to original material requirements, 17 Ph poppet and 52-100 chrime sleeve, have been successfully accomplished.	NUMBE C CONT OC SPE ENDOR	EFFECTIVITY	NOMENCLATURE	DUALIFIED BY	R M M M M M M	TEST SCHEDULE TART COMP
QCDI	27-08569-1 27-08569C 27-08501B Vinson Manufacturing A-61071	770 880 930 1000 1030 1030 1130 1300 1440 1520 1670	Valve-Safety, Hydraulic	L	relief valves were preproduction tested. results were reported Wyle lab report 6608, d 1-30-59, Vinson report QTR 61071, dated -60 and Garwood labs 1855, dated 8-8-60. tests were conducted as required by the unit urement specification 27-08501. design group approved the 27-08569-1 valve AF LA-001 and LA-002 on 8-30-61/Vinson facturing report QTR 61071, Addendums 1, II, III. NOTE PET tests of this unit, manufactured to original material requirements, 17 Ph poppet and 52-100 chrome sleeve, have been successfully accomplished.	omplete May 1961
			QCDI			

SUMMARY			HYDRAULICS	
EFFECTIVITY	NOMENCLATURE	DUALIFIED BY	REMARKS	TEST SCHEDULE START COMPL
77D 88D 93D 100D 103D 107D 107D 113D 130D 144D 152D 167D	Cylinder-Actuator, Hydraulic, Inboard Vernier Pitch-roil	Oth	The actuator cylinder was qualified based on similarity to the 7-08243 actuator cylinder, which was preproduction tested, and by additional tests paragraph 4.4.1, 4.4.2, and 4.4.3 of the procurement specification 27-08519C. Additional tests are reported in test letter No. 9224 and TR No. 348. The 27-08573-1 unit is similar to the 7-08243-1 except that the 27-08573-1 units use high temperature 0-rings. GD/A design group approved the 27-08573-1 on VAF MC 21809, dated 10-29-58.	Complete Oct. 1958
			NOTE	
			This unit is alternate and interchangeable with the Clemco 27-08573-801.	

MERCURY TEST SUMMARY	ARY			HYDRAULICS		
C C C C T	EFFECTIVITY		DONFIFIED BY		TEST	ST
27-08573-1 27-08573B 27-08519C Bohanan Company 50006-001	Not to L to u sed u sed	Cylinder - Actuator, Hydraulic, Inboard		(5-61) The Bohanan actuator 27-08573-1 is not to be used on any missile. The unit design has been rejected. Clemco (Interstate) is the only acceptable actuator. Refer to Clemco (Interstate) 27-08573-1 and Clemco (Interstate) 27-08573-3 in this section.	# # # # # # # # # # # # # # # # # # #	
A2407 (REV 11-01)						

	TEST SCHEDULE START COMPL	See Remarks
HYDRAULICS	REMARKS	Approved besed on similarity to the 27-08573-1 and 7-08243 units, which were preproduction tested, except that the 27-08573-3 design requirements specify nickel plated 4130 steel for the cylinder body and chrome plated 17-4 Ph stainless steel for the piston. NOTE This unit has successfully passed PET tests. It is considered, by the design group, to be satisfactory for flight use.
	DUALIFIED BY	BOS
	NOMENCLATURE	Cylinder - Actuating, Vernier Hydraulic, Pitch-Roll
SUMMARY	YTIVITY	77D 93D 103D 107D 113D 130D 144D 152D 167D
MERCURY TEST SUN	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME VENDOR P/N	27-08573-3 27-08573 27-08519C Clemco

At the present time no additional qualification testing is planned, since this design is similar to 7-C8243 and 27-08573-1, except that high temperature 0-rings are used and material change, as indicated.

07	TEST SCHEDULE START COMPL	Complete Oct. 1958	
HYDRAULICS	REWARKS	The vernier actuator cylinder was qualified based on similarity to the 7-08283-3 actuator cylinder, which was preproduction tested, and by additional tests, paragraph 4.4.1, 4.4.3 of the procurement specification 27-08519C. Additional tests were reported in test letter report No. 9224-1. The 27-08574-1 unit is similar to the 7-08283-3 unit except that the 27-08574-1 units use high temperature 0-rings. GD/A design group approved the 27-08574-1 on VAF MC 21808, dated 10-29-58.	a.I.O.
	DUALIFIED BY	Oth	
	NOMENCLATURE	Cylinder - Actuator, Hydraulic, Outboard Vernier Yaw	
SUMMARY	TTIVIT73	77D 88D 53D 100D 103D 103D 113D 130D 152D 167D	
MERCURY TEST SU	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	27-08574-1 27-08574D 27-08519C Interstate 2778-1	

This unit is alternate and interchangeable with the Clemco 27-08574-80]

REMARKS
Approved based on similarity to 27-08574-1 and 7-08283-3, except that the 27-08574-801 design
requirements specify nickel plated 4130 steel
lor the cylinder body, and chrome plated 17-4 Ph stainless steel for the piston.
NOTE
This unit has recently successfully
passed PET tests. Complete re-

2. This unit is an alternate interchangeable unit with the 27-08574-1 if the -1 is manufactured by Interstate Engineering.

planned because this design is similar to 7-08283-3, except for high-temperature O-rings and material change, as indicated.

qualification of this unit is not

Trucon I Col o	SUMMARY			HYDRAULICS	
PART NUMBER SPEC CONTROL PROC SPEC VENDOP NAME VENDOR ?/N	EFFECTIVITY	NOMENCLATURE	V8 DUALIFIED BY	A A A A A A A A A A A A A A A A A A A	TEST SCHEDULE START COMPL
27-08590-1 27-08590A 27-08529C Vickers Inc. AA60401-L-2	77D 88D 93D 100D 103D 107D 109D	Pump - Axial Pi ston , Hydraulic, Sustainer	PPT	(5-61) (10-61) Preproduction tests were performed on three pumps S/N MX 15984, S/N MX 15983, and S/N MX 15985 by the GD/A ETL labs to the basic specification. The PPT data are recorded in report number 7A2063, dated 7-29-59.	Complete Nov. 1959
	130D 144D 152D 167D			GD/A design group approved PPT on VAF 40786, dated 11-23-59. Investigation of recent test failures of the unit have shown that casting flaws in the pump housing are resulting in pump mounting base failures. Units are being X-Rayed or Xyglo inspected to determine which pumps are acceptable for flight.	
				This item is alternate and interchangeable with the dash three (-3) unit.	
		QCDI			

	TEST SCHEDULE START COMPL		-				
HYDRAULICS	REMARKS	(12-61) The 27-08590-3 pump is similar to the 27-08590-1; however, the unit may be retested to satisfy revision D of the specification.	Basic difference between the -l and -3 is the -3 has a modification to the shaft to prevent possible mounting pod interference.	Investigation of recent test failure of the unit has shown that casting flaws in the pump housing are resulting in pump mounting base failures. Units are being X-Rayed or Xyglo inspected to determine which pumps are acceptable for flight.	This unit is alternate and interchangeable with the dash one (-1) unit.	The vendor is presently conducting X-Ray inspection of all pump housing castings prior to assembly and delivery of pumps.	
	DUALIFIED BY	See Re- marks					
	NOMENCLATURE	Pump - Axial Piston Hydraulic, Sustainer					
SUMMARY	VTIVITO3443	77D 103D 107D 109D 113D	130D 144D 152D 167D				
MERCURY TEST SUI	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME VENDOR P/N	27-08590-3 27-08590A 27-08529D Vickers Inc. AA60401-L-2					

3	TEST SCHEDULE START COMPL	Complete May 1961	
HYDRAULICS	REMARKS	The 27-85314-817 sustainer servo cylinder assembly consists of a 27-08563-3 servo cylinder, 27-04208-1 servo valve, and 27-08564-803 filter. The -817 replaced the 27-85314-811 assembly which utilized the 27-08564-801 filter which was subject to body cracks during vibration tests. RAR 92-10-617, dated 7-6-60, ECP 529 removed the -801 filters from all D and E series missiles still in existence. NOTE 1. For qualification of individual components listed above, see the components listed in Hydraulic and Autopilot Sections. 2. Release records show a -811 assembly as being effective for 77D, 88D, 93D, and 100D, although 88D, 93D, and 100D were flown with 27-08564-803 filters, which were replaced by AWR/RAR mentioned above. Missile 77D will also be modified to use the -803 filter, but again the installation dash number as in 88D, 93D, and 100D, will not be relidentified for just a paperwork change.	•
	DUALIFIED BY	t	
	NOMENCLATURE	Cylinder Assembly, Yaw	QCDI
SUMMARY	YTIVITO3443	93D 93D 100D 103D 103D 113D 134D 144D 152D 167D	
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME VENDOR P	27-85314-817	

	TEST SCHEDULE START COMPL	Complete May 1961
HYDRAULICS	GUALIFIED BY	The 27-85314-819 sustainer cylinder assembly consists of a 27-08563-5 servo cylinder, 27-04208-1 servo valve and 27-08564-803 filter. The -819 replaced the 27-85314-813 assembly which utilized the 27-08564-801 filter. The 27-08564-801 filter was subject to body cracks during vibration tests and was replaced by RAR 92-10-617 action dated 7-6-60. ECP 529 removed the -801 filters from all D and E series missiles still in existence.
	NOMENCLATURE	Sustainer Servo Oth Cylinder Assembly, Pitch
SUMMARY	YTIVITO3773	77D 88D 93D 100D 105D 109D 113D 130D 144D 152D
MERCURY TEST SI	SPEC CONTROL PROC SPEC VENDOR NAME VENDOR NAME	27-85314-819 GD/A

NOTE

- For qualification of individual components listed above, see the components listed in Hydraulics and Autopilot Sections.
- 2. Release records show a -813 assembly as being effective for 77D, 88D, 93D, and 100D, but 88D, 93D, and 100D were flown with 27-08564-803 filters which were replaced by AMR/RAR, mentioned above. This assembly replacement changed the -813 assembly to -819. Missile 77D will also use the -803 filter, but again, the installation dash number, as in 88D, 93D, and 100D, will not be reidentified for just a paperwork change.

MERCURY

MAJOR CRITICAL COMPONENTS

PNEUMATICS

All pneumatic major critical components have been approved. Two components, 27-08020-3 and 27-08116-11, were approved on the basis of similarity to other components which had been preproduction tested. The other components were preproduction tested.

	SCHED	OMP	e ted 1961 1961	
	TESTS	START COMPL	ф В	
	F	S		
PNEUMATICS		REMARKS	The 27-08020-3 valve was approved on the basis of similarity to 27-08020-1 per VAF 27-08020-3-LA-002, dated 3-17-61. The GD /A Design Group approved flight proof testing of 27-08020-1 per Wyle Lab. Report number 9305 in VAF 27-08020-1-LA-002, dated 12-12-60. Flight proof testing consisted of: 1. Temperature 2. Vibration to 6G 3. Life 4. Proof Pressure 5. Acceleration One sample of the 27-08020-1 was tested. The valves differ only in mounting flange configuration. (11-61) I tem was approved per revision M of the specification. (11-61) I tem was approved per revision added vendor and vendor part numbers.	
	T BX	v nð	BOS	
	T COMP	сві		
	MAD THE	SNI IOI		
	APPR 1	ENC		
J		NOMENCLATURE	Valve Assembly, LO ₂ Tank, Relief and Shutoff	QCD1
SUMMARY	ECLIAILX	4 4 3	77D 88D 93D 100D 103D 103D 113D 130D 152B 167D	
MERCURY TEST ST	PART NUMBER SPEC CONTROL PROC SPEC	VENDOR P/N	27-08020-3 7-08020A 7-08204 N Peacock Engine- ering R-50502-105	

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	COMPL	Dec Dec o
	TEST SCHED	
PNIUMAFICS	REMARKS	The 27-08103-3 valve was preproduction tested and results reported in Test Report 1078. GD/1 design group approved the 27-08103-3 valve in VVF MC 3447, dated 10-2-59. Three samples were tested. (11-61) Item was tested to D revision of the Specification. Present specification is revision E. The E revision added vendor and vendor part number.
1	buar by	PPT
	CRIT COMP	
	INSTI RE CE	
	ENGE -	
	NOMENCLATURE	93D 93D 93D 93D 93D 94D 95D 95D 967D 967D
SUMMARY	KPPECTIVITY	88D 88D 93D 100D 103D 103D 113D 130D 152D 152D
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME VENDOR P/N	27-08103 B - 1 - 1 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2

	CHED	oeted 10ਹ 10ਹ 9
	TEST SCHED	Completed (Oct. 1059
PNEUMATICS	REMARKS	The 27-08104-3 valve was preproduction tested. Results were reported in Test Report number 1079. GD/A design group approved the 27-08104-3 Specification 27-08104C in VAF MC 38448, dated 10-2-59. Three samples were tested. (11-61) Item was tested to C revision of the specification. Present specification is revision D. The D revision added vendor and vendor part number.
	60Vr BX	Ldd
	CRIT COMP	
	TOR SERVE	
	ENGB F =	
	NOMENCLATURE	Valve - Pressure Relief, Fuel Tank
SUMARY	EPPECTIVITY	770 880 930 1000 1030 1030 1130 1300 1440 1520 1670
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	27-08104-3

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qcDI	5
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	Form \$2/97 (5-61)
	i.o

Item was tested to C revision of the speci

Present specification is re-

fication. vision D.

The D revision added vendor

and vendor part number.

dated 6-17-59 and MC 37720, dated 9-17-59.

Two samples were tested.

(11-61)

VAF's NC 29716, dated 4-8-59, NC 35612,

unit tests, specification 27-08021 on

GD/A design group approved the 27-08109-1

1959

The 27-08109-1 transducer was preproduction tested (Reports 25-227 and 25-227,

Addendum I).

Oct.

Complete

START COMPL TEST SCHED

REMARKS

(5-61)

77D Transducer -88D Differential Pressure

1000 1030 107D

Crescent Engrg.

B9-5001

27-08103D

930

130p

144D 152D

109D 113r

NOMENCLATURE

EPPECTIVITY

SPEC CONTROL PROC SPEC

PART NUMBER

VENDOR NAME VENDOR P/N

27-08109-1

DONE BY

INSLI I DE ENCB

CRIT COMP

APPR MAD

MERCURY TEST SUMMARY

PNEUMATICS

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	CHED	START COMPL	eted	0ct. 1959												
	TEST SCHED	START	Completed													
PNITMATICS		REMARKS	(5,61)	The 27-08115-1 aphere was preproduction tested (Wyle Test Reports 6117, 6141, 6294).	GD/A design group approved testing for the 27-08115-1 sphere in VAF MC 39194, dated 10-19-59.		have different vibration requirements. This requirement difference is covered by report 28-7-005%. Missile Structural	Design Criteria. Approval was requested	The second and principle in the colors	LBCR-JMP-jkh, dated 3-18-59.	IRCR-JMP-jkh, dated 3-18-59. Three samples were tested.	IBCR-JMP-jkh, dated 3-18-59. Three samples were tested.	IBCR-JMP-jkh, dated 3-18-59. [hree samples were tested. [11-61] Item was tested to J revision of this specification. Present specification is	R-JMP-jkh, dated 3-18-59. The samples were tested. -61) Was tested to J revision of this ification. Present specification is sion K. The K revision added vendovendor part number.	He-JMP-jkh, dated 3-18-59. He-JMP-jkh, dated 3-18-59. -61) was tested to J revision of this ification. Present specification ision K. The K revision added vendovendor part number.	Ne-JMP-jkh, dated 3-18-59. The samples were tested. 61) Was tested to J revision of this diffication. Present specification is sion K. The K revision added vendo vendor part number.
	'L BY	Y 2 A	PPT (5,	The ces	GD the	od s	17 P	De:	<u> </u>	<u> </u>		LB(LB(Th)	LBC LBC (11)	LBC LBC (11- Item spec revi	LBC (11. The speed	LBC (11. The spectrum of the s
	T COMP		<u>a.</u>				•		_							
	TI.	INS								_		······································				
	¥ € €	БИС		ı						_						
Y		NOMENCLATURE														
SUMMARY	RCTIVITY	A AX	770	93D 100D 103D	109D 109D 113D 130D	144D 152D										
MEACURI IEST S	PART NUMBER SPEC CONTROL PROC SPEC	VENDOR ::/N	27-0×115-1	27-08115K Virite Products 6314												

Astronautics Form A24.97 (5-61)

	Ð	긻	P • G	
	SCH	3	Feb. 1961.	
	TEST SCHED	START COMPL	Completed 1961	
PNEUMATICS		REMARKS	The 28-08115-7 Sphere was preproduction tested (wyle Fest Report 5959, unit s/Ns 5, 9, and 10). GD/A design group has approved testing of the 27-08115-7 Sphere per Specification 27-08115J in VAF 27-08115-7-1A-001, dated 2-17-61. Three samples were tested. (11-61) Item was tested to J revision of the specification. Present specification is revision K. Revision K added vendor and vendor part number.	
	INL 6Y	10	E da	
	III COMP	-		
	AP PRO STEEL	11		
	≥ ≤ #51	VZ.		
		NOMENCLATURE	Storage, Missileborne	
SUMMARY	PECTIVITY	M	930 930 1000 1030 1030 1130 1440 1640 1640 1640	
MERCURY TEST SI	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	VENDOR P/N	27-08115-7 Virite Products 6520 6520	-

Astronautics Form A2497 (5-61)

SUMARY	, L				PNEUMATICS	
		MAD	OMP	X		
	NOMENCLATURE	INGLT IDE ENCB		onvr b	REMARKS	TEST SCHED
Valve	ve - Shutoff, Motor			BOS	(5/61)	Completed Dec
9 d O	Uperated				The 27-08116-11 valve was approved on basis of similarity to 7-08234-9 in VAF 40651, dated 12-59.	956 956
					Preproduction test results of 7-08234-9 were reported in Robertshaw Fulton Test Report 1098-7R-1 and approved in VAP MC 25653, dated 1-22-59.	
					The 27-08116-11 valve per specification change C was approved in VAF MC 52487, dated 12-59.	
					ltem was approved per C revision of the specification. Present specification is revision D. Revision D added vendor name and vendor part number.	
					MAD approved C revision of specification which deleted temperature-shock requirements and added a step to the temperature-humidity test. The added step was to do three steps of the proof cycle instead of the two originally required.	
	ίαορ					
]						

Astronautics Form A2497 (5-61)

	IED MPL	e t e d 1 960	
	TEST SCHED	Completed Jan.	
	TES	CO	
PNEUMAFICS	REMARKS	The 27-08245-13 (27-08101-25) regulator is specially tested but otherwise identical to the 27-08245-3 regulator. The 27-08245-13 regulators are selected for best transient response and maximum reliability for specific use on the Mercury program. Similarity of the 27-08245-3 regulator to the 27-08101-1 is established by VAF 41967. Two 27-08101-1 regulators were preproduction tested per Test Report numbers 1080 and 1081, and the results approved by VAF 41254 and 41255, dated 12-7-59. (11-61) The item was approved per revision K of the specification. Revision M added vendor and vendor part number.	
	bual by	BO 3.	
	CRIT COMP		
	I DE SENCE		
	ENGB S =		
	NOMENCLATURE	Regulator Assembly - Pressure, Oxidizer Fk	ĄCDI
SUMMARY	EPPECTIVITY	888 938 1003 1003 1103 1130 1130 1131 11	
MERCURY TRST SI	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME VENDOR P/N	27-08245-13 27-08245J 27-08101M (27-08101-25) B. H. Hadley Co.	27-08245

	TEST SCHED	Completed 1960	
	TEST	ज o o	
PNFIMATICS	REMARKS	The 27-08246-11 regulator is specially tested but otherwise identical to the 27-08246-5 regulator. The 27-08246-11 regulators are selected for best transient response, and maximum reliability for specific use on the Mercury program. Similarity of the 27-08246-5 regulator to 27-08102-1 is established by VAF 41966. PPF of 27-08102-1 was approved by VAF 41256 per Test Reports 1082 and 1083, dated 10-12-59. Two units were tested. (11-61) Item was approved per H revision of the specification. Present specification is K revision. K change revised some temperature requirements and pressures, but all changes made requirements less severe than previously.	
	DAVE BY	BOS	
	CRIT COMP		
	IDE ENCE		
	NOMENCLATURE	Regulator Assembly - Pressure, Fuel Tank	qcDI
SUMMARY	KPPECTIVITY	77D 88D 93D 100D 103D 103D 113D 134D 152D 167D	
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	27-08246-11 27-08246K 27-08102K (27-08102-17) 5. H. Hadley (o. 10705-7	

Astronautics Form A2497 (5-61)

	SCHED	START COMPL	Harch 1960 1960		
	TEST SCHED	START	Comp eted Marc 1960		
PNFTMATICS		REMARKS	Three (S/N 86,88,96,) units of 27-08251-1 spheres were preproduction tested to the requirements of Specification 27-08251A per test reports A-218-1 and 8025. GD/A design group approved the testing of 27-08251-1 unit/Specification 27-08251A on Vir 46044, dated 3-22-60. (11-61) Item was tested per revision C of the specification. Present specification is Erevision and has not changed testing requirements. (12-61) Item is interchangeable alternate for 27-08115-1.		
1	IVE BY	nd	T d d		
	IL COMP				
	APPE 179	II			7
J		NOMENCLATURE	Sphere - Helium Storage	OCDI	
SUMMARY	PECTIVITY	Z X	44D 1000D 1000D 1003D 1003D 1103D 130D 150D 164D 167D		
MERCURY TEST SU		VENDOR P/N	27-08251-1 	27-08251	

MERCURY TEST S	SUMMARY	, k				PNEUMATICS		
PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME VENDOR P/N	KEPECTIVITY	NOMENCLATURE	INSTE	CRIT COMP	onyr by	REMARKS	TEST	TEST SCHED
27-08575-1 27-08575A 27-08520b #alter Kiddie Co. 891314	77D 88D 93D 100D 103D 103D 113D 130D 152D 167D	Sphere - Pneumatic Pressure			T d d	(6-61) The 27-08575-1 Sphere was preproduction tested. Results were reported in TR 1045 Addendum and R 1336. GD/A design group approved the 27-08575-1 Sphere /Spec 27-08520 on VAF MC 25575 dated 1-17-59 and VAF MC 40798 dated 11-23-59.	G G G	N e t e t e t e t e t e t e t e t e t e
27-08575		IGDÇ						

Astronautics Form A2497 (5-61)

MERCURY

MAJOR CRITICAL COMPONENTS

PROPULSION

All components listed in this section have been preproduction tested or qualified on the basis of similarity to previously qualified units.

Astronautics Form A2497 (5-61)

	CHED	a ted 1959 1959
	TEST SCHED	70 B p
PROPULSION	REMARKS	Approved on the basis of similarity to vendor's P/N 10576 plus additional tests to procurement specification requirements. 3228. The change included an improved actuator and a change in the Restrictor Uriston and Alberton and
	onyr bx	0 th
	CRIT COMP	
	TOE DE LA CENTRE	
	ENCE S K	
Į	NOMBNCLATURE	Valve, Sustainer Fuel Shutoff, Power Operated
SUMMARY	KFFECTIVITY	77D 88D 93D 100D 103D 103D 113D 130D 152D 167D
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	7-02281-15 7-02281E 7-02298M B.H. Hadley Co. 10576-15

	B.B.	Leted April 1959	
	TEST SCHED	Completed April 1959	
PROPULSION		Approved on the basis of similarity to vencor's P/N 10577 plus additional tests to procurement specification requirements. Valves differ only as noted on vendor drawing and VIR M7-3227, which included an improved actuator and addition of vendors name on nameplate. CV/A design group approved 7-02287-15 unit as noted on VAF 18608 and VIR M7-3227, dated 4-7-59.	
	VF BX	o th	
	TT COMP		
	APPR APPR TITE		
	₹ <u>8</u> 5		
,		Valve, 300ster Fuel Shutoff, Power Operated	qcDI
SUMMARY	PECTIVITY	24D 88D 93C 100D 103D 103D 1130D 1130D 1152D 167D	
MERCURY TEST S	PART NUKBER SPEC CONTROL PROC SPEC VENDOR NAME	7-02287-15 7-02287C 7-02297N B.H. Hadley Co. 10577-15	

Astronautics Form A2497 (5-61)

	CHED	leted July 1960
	TEST SCHED	Completed July 1960
PROPULSION		Approved on basis of similarity to the 121020 Airesearch valve. The -3 has a strengthened butterfly and shaft and a lubricated seul. Proof of similarity submitted by vendor. Approved on VAF 24200, dated 9-20-60 by and VAF 46317, dated 9-20-60 by CV/A design group.
	UAL BY	BOS
	RIT COMP	1
	DE BE	
A	NGB V	
SUMARY	EFECTIVITY	770 88D 93D 100D 103D
NEBCURY TEST ST	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	

	SCHE	July 1960	
	: 138 T 851	Completed 1960	
PROPULSION		Approved based on similarity to the 7-02315-1 valve. Proof of similarity aubmitted by vendor. The -1 was preproduction tested and report 7A 1796-R-2 was approved. CV/A design group approved valve on basis of similarity in VAF 24200, dated 7-20-60 and VAF 46317, dated 7-20-60. The -5 has a strengthened butterfly and shaft to take full actuator torque and a lubricated seal for longer life. Improved microswitches and spotfacing on flanges were also added for general improvement.	
	NYT BK	BOS BOS	
<u> </u>	EIT COMP	3	
	NEB VAR		
Y.		Valve - Fill and Drain, Fuel	
SUMARY	EFECTIVITY	1070 1090 11130 1300 1440 1670 1670	
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	7-02315-5 	

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Astronautics Form A2497 (5-61)

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	CHED	1958 1958
	TEST SCHED	Completed 1958
PROPULSION	REMARKS	Approved on the basis of similarity to the 7-2232-1 and -3. The -1 was qualified by design evaluation tests conducted on one specimen by GD/A tests laboratory. The tests are recorded in report 7A1231 dated 31 July 1958. The -805 has changes on the holes in the flanges, addition of a boss on one duct and slight dimensional changes on two elbows.
	δΩVΓ EX	BO S
	CRIT COMP	
	TOR TO THE TANK THE T	
	ENGB F	
У 4	NOMENCLATURE	Line Assembly, Sustainer, Fuel
SUMMARY	EPPECTIVITY	93D 93D 100D 103D 103D 113D 130D 152D 167D
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME VENDOR P/N	7-22232

	CHED	10 ft to
	TEST SCHED	a
PROPULSION	RECARKS	Approved on the basis of preproduction tests conducted on two specimens by GD/A test laboratory. The tests are recorded in report 7A2085 dated 6-27-59.
	PUAL BY	4
	CRIT COMP	
	TAYOUY	
	IDE 5	
X	HOMENCLATURE	Inlet Manifeld, Beester Liquid Oxygen
SUMMARY	EPPECTIVITY	110 10 10 10 10 10 10 10 10 10 10 10 10
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENTOR NAME VENTOR P/N	7-23205-815 GD/A 7-23205-815

Astronautics Form A2497 (5-61)

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	COMPL	ם בי טמה סמה פ ספה פ	
	TEST SCHED	Q	
PROPULSION	REALTH	Approved on the basis of preproduction tests conducted on 2 specimens by GD/A test laboratory. The tests are recorded in report 7A2085 dated 6-27-59.	
	DAVE BY	L dd	
	CRIT COMP		
i	INST.		1
	ENGB SE		1
,	NOMENCLATURE	Inlet Manifold, Booster Liquid Oxygen QCDI	
SUMMARY	EFFCTIVITY	77D 88D 93D 100D 103D 103D 113D 152D 167D	
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME VENDOR P/N	7-23205-817	

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		1		\neg
	S B B	COMP	ର ଜୁନ୍ଦ ଓ ଜୁ	
	EST SCHED	START COMPL	O D	
PROPULS 10N		REMARKS	Approved on the basis of similarity to the 7-23419-5, which was qualified by evaluation tests conducted on one apecimen 5: GD/A test laboratory. The test was recorded in report 7B 1665-1 dated 8-15-5, and report 7B 1665-2 dated 9-12-59.	
	IT BL	onv	808	
	T COMP			
		I NE I DI ISMO		
,Y		NOMENCLATURE	Inlet Manifold, Booster Fuel	
SUMMARY	PECTIVITY	ELI	77D 88D 88D 100D 1003D 103D 1113D 1130D 167D 167D	
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	VENDOR P/N	7-23419-801 	

Astronautics Form A2497 (5-61)

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	TEST SCHED	leted 1961
	TEST SCHED	Ω, E (C)
PROPULSION	BEMARKS	Qualified by preproduction tests conducted on 2 specimens by GD/A test laboratory. The combined preproduction and evaluation test was recorded in Report 27A472, dated 2-13-61.
	60Vr bx	Lad
	скіт сомр	
	ENGR PENSION STATE OF THE PROPERTY OF THE PROP	
	ENGB P E E	
	NOMENCLATURE	Sustainer LOX Line Assembly QCDI
SUMMARY	EFFCTIVITY	1000 1000 1000 1000 1000 1100 1100 110
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	27-23238-5

Astronautics Form A2497 (5-61)

SUMARY						PROPULSION		
TIVIT		_ ~ 3	MAD	COMP	3£			
E NOMENCLATURE	RE	ENCE	I NALI I DE ENCB	TIAO	davr	REMARKS	TEST SCHED START COMFL	CHED
Valve Assembly, Fill	Fill				0th			
88D and Drain, $L0_2$						Approved on the basis of similarity to 27-02102-827 which was preproduction	Completed Dec.	e tod Dec.
1000						tested and used on D series missiles.		1960
1030						In addition, supplemental qualification		
1090		-				and B) by Aire		
1300						search. The -829 valve is similar to the -827 valve except a sealed metal box con-		
144D 152D	-					pletely encloses the actuator; the elec-	-	
1670						trical leads are potted; the actuator is rotated 180°; and the housing is cast.		
						Airesearch Test Report AE-7456-R covers the tests on the -829 valve and Test Report AE-7331-R covers the earlier test on the -827 part.		
						CV/A Design Group approved the valve on VAF 52217, dated 12-12-60.		
						Deviations from 7-00209B are as follows:		
	-					1. Temperature, altitude and humidity. 2. Pressure reduced from 30 inches Hg. to 20.58 inches Hg. rather than 1 mm. Hg. 3. Four hour test at +40°F deleted.		
						Tests added:		
						1. Pressure Drop and Dynamic Flutter, 2. Proof Pressure,		
qcdi						 Flush and Purge System Test, Airborne Valve Actuator Test, Ground Support Valve Test. 		
						(Continued on next page)		

Astronautics Form A2497 (5-61)

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	COMPL	1960 1960
	TEST SCHED	Совр
PROPULSI 0N	REMARKS	Tests Added: 6. Burst Pressure Test 7. Low Temperature with LN ₂ test. 8. Storage Test. 9. Deflection Load Test.
	onvr bx	
	CRIT COMP	i i
	TOR SERVE	
	ENGB & K	
	NOMENCLATURE	IGDI
SUMMARY	EFFECTIVITY	
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	(Continued) (Continued)

		, a
	E E	Completed March 1961
	8 5	
	TEST SCHED	ပိ
		6 • I
		Qualified by preproduction tests conducted on 2 units, serial numbers 1 and 2, by Reaction Motors Inc. The preproduction test was recorded in Test Reports CMP 102, and appendices A,B, and C, and Test Report 1221-1. CV/A design grup approved PPT on 3-1-61. Tests performed deviated from book specification 27-02248D T-A-H requirements, paragraph 4.4.2. (8-61) Iest deviation was approved by VAF53587, dated 8-5-60.
SION		n tests con- numbers lan in Test Repo in Test Repo B, and C, an d PPT on 3-1- from book sperequirements, ed by VAF5358
PROPULSION	BKS	
	REMARKS	reprodu Itto, se Motors no tors opendic 1 devis devis devis es app
		Qualified by preproduction ducted on 2 units, serial 2, by Reaction Motors Inc. duction test was recorded CMP 102, and appendices A, Test Report 1221-1. CV/A design grup approved Tests performed deviated ffication 27-02248D T-A-H r paragraph 4.4.2. (8-61) Test deviation was approved dated 8-5-60.
		Qualified by producted on 2 unducted on 2 unduction test well not be and allowed by the set of the
		(5/61) Qualified ducted on 2, by Readuction tCMP 102, Test Beportication paragraph (8-61) Test devidated 8-5
	DANE BY	PPT
	CRIT COMP	
	INSTI-	
	TORE SEE	
	38	Section)
	L AT U	t er t ec t Lor
	ENC:	ooste d Sect,
	NOMENCLATURE	Valve-Booster, Disconnect, L02 (Forward Sectio
		Valv Dise (Fo)
SUMMARY	EPPECTIVITY	77D 88D 93D 100D 103D 103D 113D 130D 144D 152D 167D
TEST S	BOL C NAME P/N	- Motors
MERCURY 1	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	
MER	PART SPEC PRO VE	27-02248.
		

Astronautics Form A24,97 (5-61)

TT.

	COMPL	larch 1201	
	TEST SCHED		
PROPULSION	REMARKS	Qualified by preproduction tests conducted on 2 units, strial numbers 1 and 2, by Reaction Motors Tnc. The preproduction test was recorded in Test Reports CMP 102 (appendices A, B, and C) and Test Report 1221-1. CV/A design group approved the preproduction tests on 3-1-61. Tests performed deviated from book specification 27-02248D T-A-B requirements, paragraph 4.4.2. (8-61) Test deviation was authorized by VAF53588 dated 8-5-60.	
	onyr br	L d d	
	CRIT COMP		
	AUNA TINITE		_
	ENGB & E		
	NOMENCLATURE	Valve-Booster, Disconnect, LO2 (Aft Section)	「つつ
SUMMARY	KFFECTIVITY	930 930 1000 1000 1030 1130 1130 1440 1520 1670	
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOL NAME	27-02248-3 	

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	CHED	1950 1950 50 - 50 - 50 - 50 - 50 - 50 - 50 - 50
	TEST SCHED	de ■ Co
PROPULSION	BEMARKS	Qualified by GD/A test laboratory. Engineering evaluation and preproduction tests were conducted on 4 units (serial numbers A298-1, A298-2, -3 and -5). The PPT was recorded in Report 7A2324, dated 8-19-59.
	DUAL BY	E d d
	CRIT COMP	
	TOR SENT	
	ENGE SE	
	NOMENCLATURE	Valve Assembly, Fuel Booster Disconnect (Aft Section)
SIDMARY	EPPECTIVITY	77D 88D 93D 100D 103D 103D 113D 130D 152D 167D
MERCITY TEST S	ER PROL SC NAMS 1 P/N	27-21136-3

Astronautics Form A2497 (5-61)

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MERCURY

MAJOR CRITICAL COMPONENTS

PROPELLANT UTILIZATION

None of the items in the propellant utilization system require further approval action prior to flight.

The liquid oxygen transducer assemblies are part of the propellant loading system and replace assemblies used on early D series missiles. No further approval action prior to flight is necessary for the liquid oxygen transducer assemblies.

MERCURY TEST SI	SUMMARY					PROPELLANT UTILIZATION		
PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	TIAIL	•		h	IT BX		TEST SCHED	6
VENDOR P/N	A	NOMENCLATURE	I DI ENC	СВІ	AUG	RIMARKS	START COMPL	OMPL
7-43011-817 27-04001 GD/A	177 88 93D 100D 103D 103D 113D 152D 152D 167D	Manometer Assembly,			BG S	The 7-43011-504 was preproduction tested to 7-00209B requirements in accordance with test report 7B 2313-2, dated 12-2-59 and flight proof tested to 7-00210B requirements in accordance with test report 7B 2217-2, dated 8-11-59. The 7-43011-504 unit used a new housing assembly and was a reworked 7-43011-803 unit or essentially a -815 unit. Changes resulting in the -817 unit consisted of a mandrel connection to a "banana" plug and the use of PT201 acrylic resin coating inside the manometer housing. The 7-43011-817 unit has a successful flight history.	Completed 195	Dec 1959
		QCDI						

Astronautics Form A24.97 (5-61)

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	2	Dec. 1959	
i	TEST SCHED		
	FES	Comp	
PROPELLANT UTILIZATION		The 7-45012-504 was preproduction tested to 7-00209B requirements in accordance with test report 7B 2513-2, dated 12-2-59 and flight proof tested to 7-00210B requirements in accordance with test report 7B 2217-2, dated 8-11-59. The 7-43012-504 unit used a new housing assembly and was a reworked 7-43012-803 unit or essentially a -811 unit. Change: resulting in the -819 unit consisted of a mandrel connection to a "banana" plug and the use of PT201 acrylic resin coating inside the manometer housing. The 7-43012-819 unit has a successful flight history.	
	UAL BY	BOS	
	RIT COMP		
	NGB PE E		
	≥ \$ BON		
	A STANTON	Manometer Assembly, Lox	idop.
SUMARY	PPECTIVITY	77D 88D 93D 100D 103D 103D 113D 152D 152D 167D	
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	7-43012-819 -27-04001 GD/A	7-43012

Astronautics Form A2497 (5-61)

SUMMARY
TIAIL
NOMENCLATURE
Computer Comparator
93D 103D 103D 103D 113D 130D 144D 152D 167D
бсрі

Convair/Astronautics Form A24.97 (5-61)

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	SCHE		
	TEST SCHED	Compete	
PROPELLANT UTILIZATION	TE	ucturally modi- y, which was failed shock and oort 27A126. The y similarity to report (27A1136) n similarity to vered in this used on the 100D	
	OUL BY		
	TIH COMP		
	11SN		
	NGB PER SHORE		
	NOMENCLATURE	Transducer Assembly - Liquid Oxygen	
SUMMARY	EPPECTIVITY	77D 88D 93D 103D 107D 113D 113D 152D 152D 167D	
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	27-04240-809 27-04239C GD/A 113-809100-1	

Convair/Astronautics Form A2497 (5-61)

APPR APPR APPR APPR APPR APPR APPR APPR
This unit is similar (atructurally modi- fied) to the -801 assembly, which was pre- production tested, test report 27A126, but failed shock and vibration tests. The -811 unit was qualified by similarity to the -801 unit plus proof cycle, shock, vibration, and life tests, test report (27A1136).
This unit is similar (structurally modi- fied) to the -801 assembly, which was pre- production tested, test report 27Al26, but failed shock and vibration tests. The -811 unit was qualified by similarity to the -801 unit plus proof cycle, shock, vibration, and life tests, test report (27Al136).
This unit is similar (structurally modified) to the -801 assembly, which was preproduction tested, test report 27A126, but failed shock and vibration tests. The -811 unit was qualified by similarity to the -801 unit plus proof cycle, shock, vibration, and life tests, test report (27A1136).
unit is similar (atructurally modi- to the -801 assembly, which was pre- ction tested, test report 27A126, ailed shock and wibration tests. 811 unit was qualified by similarity c -801 unit plus proof cycle, shock, tion, and life tests, test report 136).
ction tested, ailed shock s 811 unit was e -801 unit p tion, and lif 136).
-811 unit was qualified by he -801 unit plus proof cycation, and life tests, test 1136).
and life tests,

Astronautics Form A24,97 (5-61)

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MERCURY

MAJOR CRITICAL COMPONENTS

ELECTRICAL

The electrical system is composed of batteries, inverters, power changeover switch, distribution harnesses, and miscellaneous switches, relays, and connectors.

All items have been preproduction, flight proof tested, and/or approved on the basis of similarities, with exception of the harnesses and abort sensing relay.

The harnesses are fabricated to MIL-W-8160 specification requirements.

Flight proof testing on the abort sensing relay 27-61147-805 is complete and report is being prepared.

In some instances, where items have not conformed to MIL-I-6181B and MIL-I-26600 test requirements, deviation requests have been processed and submitted for $\Lambda FBSD$ approval.

The noise generated by action of the thermostatic heater switches used in the missileborne batteries exceeds the limits (conducted interference, and radiated interference) of MIL-I-6181B and MIL-I-26600 test requirements. The battery heaters and the thermostatic heater switches are nonoperative during flight. During countdown operation the heaters cycle on and eff at intervals of about 10 to 15 minutes; the excessive noise exists for less than one second, when switches open and close.

	9 1	од
	TEST SCHED	Completed March 1961
	STS	0.
	TE	
ELECTRICAL	REVARKS	Approved based on similarity to 7-06344-1 (200X-30-3) plug which was preproduction tested. Design group approved the unit on VAF MC 7-06344-9-LA-001, dated 1-19-61.
	buar by	
	CRIT COMP	
	MASSIA	
	TOE LANGE	
ز	NOMENCLATURE	Staging Plug, Propulsion, Electrical
SUMARY	KPPECTIVITY	77D 88D 93D 100D 107D 113D 130D 144D 152D 167D 103D
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	7-06344-9 7-06344

	TEST SCHED	Jan. 1961] ·
	TEST SCHED	d ■ ° C	
ELECTRICAL	REMARKS	The staging receptacle was approved based on similarity to 7-06345-3 (200x.30-4) receptacle which was preproduction tested. Design group approved the unit on VAF MC 7-06345-5-LA-001 dated 1-19-61.	
	DOVE BY	BOS	
	CRIT COMP		
	TIREL LENGTH		7
	TOE SE		1
,	NOMENCLATURE	Staging Receptacle, Propulsion	
SUMMARY	EPPECTIVITY	77D 88D 93D 100D 107D 109D 113D 113D 144D 152D 167D 167D	
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME VENDOR P/N	7-06345-5 7-06345-5 7-06345 200X-30-5004 200X-30-5004	

Astronautics Form A24.97 (5-61)

	G H	eted April 1959	
	TEST SCHED	Completed April 1959	
ELECTRICAL		(5-61) One specimen has been preproduction tested at GD/A Laboratory. Results are reported in Test Report 7A1870, dated 4-30-59.	
	VI BX	F	
	TI COMP		
	TJS		
	× ₹ 89		
X		Inverter	QCD1
SUMMARY	PECTIVITY	77D 88D 93D 107D 109D 113D 130D	152D 167D 100D 103D
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	7-06349-3 27-06303-1 Bendix 32B77-13B	

0

	SCHED	START COMPL	e ted Jan 1959	
	TEST SCHED	START	Completed Jan 1959	
ELECTRICAL		(5_61)	Approved based on similarity to 7-06380-1 which has been flight proof tested at GD/A. (Test Report 7A1607-R, dated 1-30-59). NOTE: Two apecimens were tested. First specimen, serial number 9, failed; second specimen, serial number 13, passed flight proof test requirements. Deviation request, ECP-CAC-107A-334-80R2 has been submitted to waive some test requirements of MIL-1-26600. * Battery voltage dropped below minimum requirements (22vdc) after 6 minutes of discharging at the rate of 2.0 amperes. Present specification requirements calls for discharging at the rate of 1.25 amperes.	
	VI BX	υ ρ &		
	IT COMP			
	APP HO	I D		
		Battery, RSC		qcDI
SUMMARY	PECTIVITY	.EL	93D 93D 100D 103D 103D 113D 133D 152D 167D	
MERCURY TEST SI	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	7-06380-3	7-03236 Yardney Corp 5500	7-06380

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	}	TEST SCHED	00 c t o 0 0 c t o 1 9 6 0 0 c t o 1 9 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
	İ	7 SC	D
		TES	Comp eted Oct. 1960
	ELECTRICAL		Design group approved item based on similarity to vendor P/N 963-1B (GD/A P/N 27-06177-1) which has been preproduction tested by vendor, ER 1640 dated 5-3-60. Flight proof tested by GD/A, Test Report 27A-801R, dated 10-21-60. (12-61) NOTE See note under Kinetic switch 27-06106-801.
		VI BL	Oth BOS & EPT
Ì		TIT COMP	•
		A P P P P P P P P P P P P P P P P P P P	
		≥ \$ 801	
			Switch Assy, Power Changeover
	SUMMARY	PECTIVITY	88 88 10 10 10 10 10 10 10 10 10 10 10 10 10
	MERCURY TEST S	~	27-06106-801

	TEST SCHED	Ne ted 1959 by 1950 by	
	TEST SCHED	<u> </u>	
ELECTRICAL		Two specimens preproduction tested at GD/A (Test Report 7A1871R, dated 3-19-59). First specimen has been subjected to temperature, altitude, humidity, vibration, acceleration and life tests. Second specimen has been subjected to RF, fungus resistance, sand and dust and salt atmosphere tests. (12-61) NOTE In accordance with design group request only Kinetic switch is to be used on Mercury missiles.	
	OAL BY	E dd	
	RIT COMP		
	DE LE		\exists
	NGB & E		
		Swite Power	
SUMMARY	TPECTIVITY	88D 93D 100D 103D 103D 113D 113D 113D 152D 167D	
MELCURY TEST SI	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	15	

Astronautics Form A2497 (5-61)

MERCURY TEST ST	SUMMARY					120	ELECTRICAL	
PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME VENDOR P/N	KPPECTIVITY	NOMENCLATURE	TISKI TOR TOR TOR TOR TOR TOR TOR TOR TOR TOR	CRIT COMP	GOVE BY	BENARKS	TEST SCHED	9 12
27-06348-1 27-06348 Eagle Picher MAR 4073	77D 93D 100D 103D 107D 113D 130D 144D 152D 167D	TlM Battery, Lightweight			PPT	(5-61) Flight proof tested by wendor. Test Report MAR 4073 dated April 1961. Missile Electrical Design Group has approved article LA-004, dated 5-8-61 for flight proof test- ing only. Deviation request, ECP-CAC-107A-334- 80R2, dated 5-3-61 has been submitted to waive some of the test requirements of MIL-1-26600.	Completed April 1961	
		ącD1						



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	TEST SCHED	START COMPL	х •
	ST 8	R	et e
ELECTRICAL	18	ST/	•
		RIDAARKS	Electrical Design Group states that the specimen has been flight proof tested and test report has been reviewed and approved NOTE: A deviation request ECP-CAC-107A-354-MOR2 has been submitted to waive some of the test requirements of MIL-I-6181.
	Vr Bk	nd	F 4
	II COMP		
	SE JIE	ИП	
	45 AP 40 AP	ID	
	~ as	***	<u> </u>
ľ		NOMENCLATURE	Battery, TLM
SUMMARY	PECTIVITY	43	20 20 20
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	VENDOR P/N	27-06358-1

		,		
	TEST SCHED	START COMPL	e ted July 1959	
	ST 80	RTC	Completed July 1959	
	18:	STA	£	·
ELECTRICAL		RMARKS	Seven specimens have been flight proof tested at GD/A. (Test Report number 7442285, dated 7-27-59). NOTE: Battery is remotely activated. Seven batteries were required to accomplish the test. Deviation request, ECP CAC-107A-334-80R2. has been submitted to AFBMD to waive some test requirements of MIL-I-6181.	
	T BX	ΛUQ	ह ते थ	
	T COMP	CRI		
	MAD APPR	I DI		
	₹ 8	ENC		
,		NOMENCLATURE	Battery, TLM	
SUMMARY	TIVITY	KE F	88D	
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC	VENDOR P/N	27-06358-1 27-06358 Yardney Corp. 1756	

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	TEST SCHED	START COMPL	ب د د
	1 80	3 T	
	T ES	STAI	Comple
		,	
ELECTRICAL		REMARKS	Preproduction tested by vendor Deviation request, ECF CAC- 80k2 has been d to walve some of the test re- ts of MIL-I-6181.
			(5-61) Pre LA158140. 107A-334-80 submitted t quirements
	r bk	VΩδ	FAG
	T COMP		
	KVD WPPR	118 110)	
	3 2 8	IDE	
		NOMENCLATURE	Battery Pack, Main Missile Power
SUMMARY	BCTIVITY	I AN	888 930 1000 1030 1040 1130 1300 152¢ 1670
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC	VENDOR P/N	27-06359-3

	COMPL	t e
	TEST SCHED	Complete
ELECTPICAL	REMARTS	Preproduction tested by Associated Test Laboratory. Results reported in D432-1237, dated 10-5-59. Deviation request, ECP CAC-107A-334-80k2 has been submitted to waive some of the test requirements of MIL-1-6181. TWX-BSBKK-17-7-45, dated 17 July 1961 from BSD to C. W. Blakey, deletes Yardney as a source for the main missile battery when it is used as flight article.
	60AL BY	Idd
	CRIT COMP	
	INSLI IDE ENCE ENCE	
	ENGB F	
,	NOMENCLATURE	Battery Pack, Main Missile Power
SUMARY	EPPECTIVITY	
MERCURY TEST SI	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	27-06359-3

MERCURY TEST	SUMMARY			BLECTRICAL	
PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME VENDOR P/N	EFFECTIVITY	NOMENCLATURE	OUALIFIED BY		TEST SCHEDULE START COMPL
27-61147-805 GD/A 27-61147	77D Relay 88D Abort 93D 100D 103D 109D 113D 130D 144D 152D 167D	t Sensing	FPT	Consists of the following commercial parts: Relay 97-37002-006 Diode 87-19000-006 Receptacle 81-55900-818 Flight proof testing is complete, and formal report is being prepared. NOTE Unit failed to conform to MIL-I-26600 test requirements.	Complete (See Remerks)
				Deviation request, ECP-CAC-107A-334-129 has been submitted to waive some of the test requirements of MIL-I-26600.	

A2407 REV 11 #1

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	TEST SCHED	START COMPL	Not Required
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ELECTRICAL			being t
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			similarity ich is bei
		82	the state of the s
		REMARKS	0 ×
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		Ì	ov over the state of the state
			0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
			t 14 р д д д д д д д д д д д д д д д д д д
			To be approved 27-61147-805 as flight proof te
			5 2 3 6 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
			S
_	IT BX	'n	BOS
	T COMP		
	APP 3	ID ID	
	× ≥ 8:	ENC	
			ů
		20	Installation, Sensing
		TUB	n g
		CLA	Sensing
ļ		NOMENCLATURE	
		8	Relay
			A b
B.Y			000000000000000000000000000000000000000
SUMMARY	PECTIVITY	EL	93D 93D 100D 103D 103D 103D 113D 152D 152D 167D
TEST	ZOL ZOL	P/N	303
	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	VENDOR P/N	27-61147-803
5		RND	7
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MERCURY	T S S S S S S S S S S S S S S S S S S S		L

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MERCURY MAJOR CRITICAL COMPONENTS TELEMETRY

There are six items in this section. Five were approved based on similarity to previously qualified items. One item, the lightweight TLM package for 100D, was flight proof tested and approved.

A deviation, ECP CAC-107A-334-98, has been approved for all 27-12290 assemblies.

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	GH GH	START COMPL	t e d
	TEST SCHED		Completed to the completed to the completed to the complete the comple
		8	
TELEMETRY		REMARKS	Approved based on similarity to -1 which has been flight proof tested plus additional life test with modified commutator motor installed. Partially meets MIL-I-6181 test requirements. Similarity approved by Design Group.
			Approved tional strong for the following for the
	Vr Bl	σΩ	BOS
	CRIT COMP		
	APPR APPR	IN ID	
	≥ ₹ 80	EN	
SUMARY		NOMFNCLATURE	TLM Package
	PECTIVITY	EL	88BD
MERCURY TEST ST	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	- 1	27-11541-866 7-01658 Bendix

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	TEST SCHED	STAKT COMPL	Completed					
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TELEMETRY			-11310 d except tempera-	require-				
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			test rage	test				
ļ			ity to 7 of teste storage		Design			
	2		larity to 7-11310 proof tested except oF storage tempera-	618				
	o A G e Propi		on similarity flight proof rom -65°F sto	-	1 by			
	S	5	3 n s	MII)			
i		1	-	t B	ppro			
İ			bee bee	=	8			
			2 d 1 1 2 d	y .	rits			
		1 (2)	ch to der	tia] ts.	1 1 8.7			
		(5-61)	Approved based on similar which has been flight profor deviation from -65°F ture.	Partially meets MIL-I-6181 ments.	Similarity approved by			
}		+-	·			 		
	UAL BY	B 0S				 		
	RIT COMP							
	DE PER NOR	I I				 		
	NGB & K	<u>a</u>				 		
		Accessory Package						
1	<u> </u>	a C S						
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	ž	¥						
		TLM,						
SUMMARY	PPECTIVITY	Ta				1	·	
ZUN.		\				 		
1	2 20 L	:						
TEST	T NUMBER EC CONTROL ROC SPEC VENDOR NAME	3 29	329					
URY	RT NUMBER PEC CONTR PROC SPEC VENDOR N	-11616-829	 16 16-8					
MERCURY	180 C	9	 012] 4					
ā	PART N SPEC PROC VEN	27-1	$\begin{array}{cccccccccccccccccccccccccccccccccccc$					27-11616
		T.,				 		

		-1	
	TEST SCHED	START COMPL	t e d
	1 30	RTC	d
	1.83	STA	•° ₂ (
TELEMETRY		REMARKS	ed on similarity (change in Completed which has been flight proof sets MIL-I-6181 test require-tpproved by Design Group.
			Approved based on similari the oscillator and lowered to 27-11541 which has been tested. Partially meets MIL-I-6181 ments. Similarity approved by Des
	T BL	v n 6	BOS
	T COMP		
,	9 2 73	INS ID:	
	MAPR RAPPR	SNC	
ز		NOMENCLATURE	TLM Package, RF #2
SUMARY	RCTIVITY	4.47	1000
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC	VENDOR P/N	27-12210-809

MERCURY TEST ST	SUMMARY	ز				TELEMETRY		
PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	EPPECTIVITY	NOMENCLATURE	INSTE	CRIT COMP	onvr br	REMARKS	TEST SCHED	COMPL
27-12290-3 27-01214 GD/A 27-12290-3	0001	TLM Package, Light Weight			Ed 24	Consists of a transmitter built by Texas Instruments and a signal conditioner built by GD/A. Both have been separately flight proof tested to 7-00210B except for a low temperature test requirement of -30°F, and a non-operating test at 0°F. (10-61) The signal conditioner exceeded the limits of conducted interference and audio frequency conducted susceptibility per MIL-1-26600. A deviation request, CCP CAC-107A-534-98 (CCN 1502 for -4 contract; CCN 663 for -299 contract; CCN 58 for -699 contract), has been approved for all 27-12290 assemblies. Testing has been completed and the report has been reviewed and approved.	OBP PP	a.

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	TEST SCHED	TART COMP							
Ì	E 86	<u>n</u> <u>n</u>	 	_	·	 			
	TES	START COMPL (Omplete							
TELEMETRY		(10-61)	Approved based on similarity to 27-12290-3, which was flight proof tested. (Refer to -3 remarks).	Similar to 27-12290-3 except for rework of transmitter and RF filter to change frequency.					
	NAL BY	nd Se							
	IL COMP	13							
	3 g 30	111			· · · · · · · · · · · · · · · · · · ·	 			
	A P P P P P P P P P P P P P P P P P P P								
Y			light weight						
SUMARY	PPECTIVITY	930				 			
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	27-12290-803	$\begin{array}{cccccccccccccccccccccccccccccccccccc$						

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MERCURY

MAJOR CRITICAL COMPONENTS

RANGE SAFETY

This section covers a command set, arming device, destructor, three-second destruct delay unit and power and signal control unit.

All items have been preproduction tested, flight proof tested and/or approved on the basis of similarity to units that have been tested.

1	TEST SCHED	Completed	
	TEST	Совр	
RANGE SAFETY	BEMARKS	Approved on basis of similarity to 7-04237 per Article LA 27694A, dated 5-7-59, and VAF MC 31,407, dated 5-8-59. Additional tests consisting of shock, operating vibration and operating acceleration have been performed at GD/A as reported in Test Report 741822. NOTE: Deviation request, ECP-CAC 107A-334-36 has been submitted to raive some of the test requirements of MIL-1-26600. The deviation request has been approved only for Contract AF 04 (647)-299 by CCN 253, MSN 61, BMC-61.	
	onvr br	0 th	
	CRIT COMP		
	INSTE		
	NOMENCLATURE	RSC, Destruct Unit	
SUMMARY	EFFECTIVITY	770 880 930 1000 1030 1030 1130 1300 1440 1520 1670	
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	27-04306A (27-04230F) Beckman and Whitley 175-9D-1	

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		COMPL e t e d	
	TEST SCHED	COMP eted	
RANGE SAFETY		EMARKS (5-61) Limited flight proof tested. Modified module in audio section of GFE P/N 319600, MAKK I has only been vibration tested. Modification decreases gain by a factor of three (3) and increases linearity. Testing approved by Design Groups.	
	Vr BX	no E	
	IT COMP	1	
	E PP E E		
		Command Set, Range Safety	φCDI
SUMMARY	FECTIVITY	880 880 930 1000 1000 1000 1000 11000 1130 113	
MERCURY TEST SU	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	VENDOR P/N 27-36014-1 (7-03241) GD/A 27-3601:1-1	27-36014

*

	BED	t t	
	TEST SCHED	Complete	
RANGE SAFETY	REMARKS 9	0ne specimen has been preproduction tested at GD/A as reported in Test Report No. 7A2055, dated 6-8-59. Test report has been reviewed and approved by cognizant engineers. Deviation request, ECP - CAC-107A-534-153, has been submitted to waive the test requirements of MIL-I-26600. NOTE (a) Facility equipment could not attain operating altitude of 1.0 mm of Hg. Altitude attained was 1.5 mm of Hg. Of lack of shipping container. (b) Shipping vibration omitted because of lack of shipping container. (c) Toggle switches replaced by singlepole knife switches.	
	bual by	F	
	CRIT COMP		
	TOR LANGE OF THE PROPERTY OF T		
	ENGB S =		
j	NOMENCLATURE	Arming Device, RSC	9CD!
SUMMARY	KFFECTIVITY	77D 88D 93D 100D 103D 107D 103D 113D 130D 152D 152D 167D	
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	27-36244-1 (27-03008-3) GD/A 27-36244-1	

	9 3	70
	TEST SCHED	e t e d
	RT (d. C)
	TEST SCHED	٥
RANGE SAPETY	REMARKS	One specimen has been flight proof tested at GD/A as reported in Test Report number 274-2431 dated 10-20-59. Test report has been reviewed and approved by cognizant engineer.
	oual by	FPT
	CRIT COMP	
Ī	A MENI	
	TOR LEGIS	
	NOMENCLATURE	Control Unit, Power and Signal
SUMARY	KPPECTIVITY	0.00 0.00
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	27-36236-801

	SCHED	START COMPL	e t e	
	CHEST SCHED	START	Complete	
RANGE SAFETY		DEMARKS	Weakness test. All tests have been performed including RF tests. Test results are being evaluated. This unit supersedes 27-36256-3, which was used on 100D missile. (12-61) Deviation request, ECF-107A-534-127 has been submitted to waive some of the radiated and conducted test requirements of MIL I-26600. Report has been reviewed and approved.	
	T BX	νnδ	0 t b	
	T COMP			
	MAD APPR	INS INS		
	7 2 8	ENC		
, i		NOMENCLATURE	Delay Unit, Three-Second Destruct	qcbi
SUMMARY	BCLIVITY	i Au	77D 88D 93D 103D 107D 113D 130D 144D 152D 167D	
MERCURY TRST S	PART NUMBER SPEC CONTROL PROC SPEC	VENDOR P/N	27-36277-1 	

MERCURY

MAJOR CRITICAL COMPONENTS

AZUSA

All transponders have been delivered to AFMTC by General Dynamics/Astronautics. The transponders are now GFE items and $\mathrm{GD/A}$ has no control of the various configurations.

Two specimens of the basic unit, 26-10002-1, were flight proof tested. One unit was subjected to temperature, altitude, humidity, vibration, acceleration, and shock tests. The other unit was subjected to life and RF tests. Phase-lock and klystron failures were encountered but were corrected, and the test requirements were met. The various dash number configurations consist of modifications of the crystal filter characteristics, and the units are approved based on similarity to the basic unit.

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	CBE	COMI	a a
	TEST SCHED	START COMPL	e ted
	F-	ST	
AZUSA		REMARKS	(5-61) * GD /A has delivered all transponders to AFWTC thus they became GFE items. GD /A has no control of dash numbers assigned for specific Mercury missiles. All dash numbers through -815 are approved on the basis of similarity to -1 which has been flight proof tested. (See Test Report 7A166R, dated 12-17-58 and AZN-26-050, dated 9-10-58) The major change among various dash numbers is the use of a crystal filter. Two specimens have been tested. S/N 189 has been subjected to temperature, altitude, humidity, vibration, acceleration, and shock tests. S/N 174 has been subjected to RF and life tests. Specimens failed to meet rhase lock parameter requirements during temperature (+120°F), vibration, acceleration, and life tests. The klystron failed during the acceleration test. Specimens were readjusted or repaired and testing was repeated until it passed the test requirements.
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	T COMP	ı	
		at	
		БИС	
X.		NOMENCLATURE	Transponder, B-Coherent
SUMARY	ECTIVITY .	KFI	•
MERCURY TEST SI	PART NUMBER SPEC CONTROL PROC SPEC	VENDOR P/N	26-10002-1 thru-815 AZD 26-001 Component Spec.) GD A 26-10002-1 thru -815

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MERCURY MAJOR CRITICAL COMPONENTS ABORT SENSING AND IMPLEMENTATION

None of the abort sensing and implementation system components require further action or approval.

MERCURY TEST SI	SUMMARY					ABORT SENSING AND IMPLEMENTATION	7
<u> </u>	PPECTIVITY		APP APP APP APP APP APP APP APP APP APP	TIT COMP	IVF BK		TEST SCHED
27-11111-825 	100 m	Abort Sensing and Control Unit		i e	9 7 7 1	This unit was flight proof tested to the requirements of 7-00210B by the GD/A test labs per test request number 2741271. The following tests were performed: 1. Temperature extremes: a. Temperature extremes: b. Altitude extreme; c. Humidity: 95% 2. Vibration a. Acceleration a. +10g, -2g; longitudinal axis b. ±5g, mutually perpendicular axes b. ±5g, mutually perpendicular axes	Completed April 1961

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	9 7	
	SCH E	April 1961
z	TEST SCHED	Completed April 196
ATIC	- T	
ABORT SENSING AND IMPLEMENTATION	REMARKS	Approved based on similarity to the -825 unit. The changes on the -825 unit resulting in a -831 unit consist of the addition of supression diodes acress the relay coils, harness routing controls, and mounting change eliminating a mechanical interference. Two specimens of this unit are being subjected to reliability testing.
	onal by	BOS
	CRIT COMP	
	TOPE TOPE	
	ENGB & K	
	NOMENCLATURE	Abort Seasing and Control Unit
SUMMARY	REFECTIVITY	388 8
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	1

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	2 14		
_	TEST SCHED	April 1961	
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ATV	118		·
ABORT SENSING AND IMPLEMENTATION	REMARKS	Approved based on similarity to the -825 unit. The changes on the -831 unit resulting in the -833 unit consist only in the use of "blue dot" transformers and decreasing the length of the magnetic amplifier mounting studs. The changes to -833 for the -835 consist of using fiber washers for motor mountings, replacing two diodes with resistor and changing two resistance values in the magnetic amplifier null voltage suppression circuit. The circuit changes prohibit high null voltage output which would prevent drop-out of the capsule fail detection relays in case of an abort. The unit did not meet MIL-I-26600 requirements. A deviation request, ECP CAC-107A-344-102 (CCN 1336 for -4 contract; CCN 722 for -299 contract; CCN 866 for -635 contract; CCN 71 for -699 contract; CCN 71 for -699 contract), was approved for all 27-11111 assemblies.	
	onvr ba	BOS	
	CRIT COMP		
	INSTE ENGE		
	ENGB S K		
	NOMENCLATURE	Abort Sensing and Control Unit	QCDI
SUMMARY	KFFECTIVITY	930 930 1030 1070 1090 1130 1300 1440 1520 1670	
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME VENDOR P/N	27-11111-835 -	

	SCHED	ه د ه ع],,
	TEST SCHED	Completed	12-5
ABORT SENSING AND IMPLEMENTATION	REMARKS	Approved based on similarity to 27-04314-1 which was qualified for use on the D and E series P U system. The valves differ only in calibration. The -1 was calibrated for a flow rate of 7.0 ±1.0 SCFH; the -5 was calibrated for a flow rate of 14 ± 1.0 SCFH.	
	oner br	BOS	
	CRIT COMP		
	TINITE EN PARTE		1
	ENGE SE		-
	NOMBNC1. ATURE	Valve, Constant Flow	Form A24.97 (5-61)
SUMMARY	KFFECTIVITY	77D 88D 93D 100D 103D 103D 113D 113D 152D 167D	
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	27-11814-3 27-04314C W.O.Leonard 128650-7 128650-7	Astronautics

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	TEST SCHED	START COMPL	- S e t e d s p t e d e d e d e d e d e d e d e d e d e	
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NO.			tested tested The The to 200 ()	
[AT]			connercention tell-60. 1-1-60	
MEN		, m	d commercial uation teste 19-1-60. Th ormed: 2 hrs) 2 hrs) 10 to 25 cp 13 axes)	
IMPLEMENTATION		REMARKS	ed comid of the control of the contr	
		RED	odified dated dated dated to 350F; 2 con 3	
AND			a modified commercial were evaluation tested 19, dated 9-1-60. The were performed: (-65°F, 2 hrs) (+165°F, 2 hrs) (.25 in., 10 to 25 cps (16 to 356's, 25 to 20 (106's, all axes)	
NG				
SENSING			(5-61) This item is a module were G)/A per 27A419, wing tests were lomperature (-65 Vibration (100 Acceleration (100	
			(5-61) This item i Twelve unit G/A per 27 wing test mperature Vibration Acceleratio	
ABORT				
7			A C 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
	IT BL	n d	0 t h	
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	TT COMP	ı		
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	₹ 8:	ENC	ę	
			Pressure, Fuel Injection (470 psid)	
		RE	Pressure, (470 psid)	
		LATI	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	10
		NOMENCLATURE	Pressure, (470 psi	4CDI
		MON	Te	
			Switch, Booster Manifold	
<u> </u>		_		
SUMMARY	PECTIVITY	KF	93D 93D 93D 100D 100D 1103D 130D 130D 152D 167D 103D	
1 1		\dashv		
TEST	T NUMBER EC CONTROL ROC SPEC VENDOR NAME	N/d	87-44900-357 Bourns Labora- tories 71731-0-4.7-000	
	TOWBER CONTROL SPEC TOOR NAM	VENDOR P/N	-44900-357 urns Labora- ries 731-0-4.7-00	
MERCURY	NON CO	RND		
N KB	PART NUMBER SPEC CONTR PROC SPEC VENDOR N	>	87-449 Bourns tories 11731-	
	P. P.		1 t B 1 1 2 2 1 1 0 0 1 1 1 1 1 1 1 1 1 1 1 1	

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		COMPL	eted Sept. 1960		
į		TEST SCHED START COMPL	Совр		
ABORT SENSING AND IMPLEMENTATION		REMARKS	This item is a modified commercial part. All six units successfully passed evaluation tests performed at GD/A per 27A419, dated 9-1-60. The following tests were performed: Temperature (-65°F, 2 hrs) (+165°F, 2 hrs) (+165°		
	ВХ	δαvr	0 t h		
	COMP				
		I DE Ence			1
		NOMENCLATURE	Switch, Pressure, Sustainer Fuel Injection Manifold (560 psia)	ĄCDI	
SUMMARY	CTIVITY	EFFE	77D 88D 93D 100D 103D 103D 113D 130D 144D 152D 167D		
MERCURY TEST SI	PART NUMBER SPEC CONTROL PROC SPEC	VENDOR NAME VENDOR P/N	87-44900-558 Bourne Labora- tories 71732-0-5.6-000	87-44900-358	

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MERCURY TEST S	SUMMARY					ABORT SENSING AND IMPLEMENTATIONS		
PART NUMBER SPEC CONTROL PROC SPEC	RCTIVITY			T COMP	T BX		TEST SCHED	В
VENDOR P/N	443	NOMBNCLATURE	I DE	сві	vnd	REMARKS	START COMPL	P.L
87-44900-359 	88D 88D 93D 100D 103D 103D 113D 154D 152D 167D	Switch, Pressure, Sustainer Hydraulic (2000 psia)			0 th	This item is a modified commercial part. All six units successfully passed evaluation tests performed at GD/A per 274419, dated 9-1-60. The following tests were performed: Temperature (-65°F, 2 hrs) (+165°F, 2 hrs) (+165	Comp eted vept. 1960	₽ → ○
		qcbi						

	TEST SCHED	Completed Sept.
	TEST	d B C C
ABORT SENSING AND IMPLEMENTATION	S NA A NA	This item is a modified commercial part. Six units were evaluation tested at GD A per 274419, dated 9-1-60. The following tests were performed: Temperature (-65°F, 2 hrs) (+165°F, 2 hrs) (+25°In., 10 to 18 cps) (+86°s, 18 to 2000 cps) Acceleration (106°s, 18 to 2000 cps) Acceleration (106°s, all axes) NOTE Two of the six units failure at 65°F. After repair, the unit developed heavy wiper lift-off around the switching point during X axis vibration. The other unit developed heavy wiper lift-off during Z axis vibration. The unit was repaired and retested and no malfunctions occurred. This unit replaced by 87-44900-356.
	SAVE BK	O th
	CRIT COMP	
	TISK)	
	ENGR SE	
	NOMBNCLATURE	Switch, Pressure, 102 Tank Ullage (21.5 psid)
SUMMARY	KFFECTIVITY	
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	87-44900-372 Bourns labors tories 50954-0-21.5-000

	HED WPL	Sept. 1960.	
	TEST SCHED	Completed	\dashv
	TES	Сол	
ABGRT SENSING AND IMPLEMENTATION	REMARKS	This item is a modified connercial part. All three units successfully passed evaluation tests performed at GD/A per 27419, dated 9-1-60. The follwing tests were performed: Temperature (-65°F, 2 hrs) (+165°F, 2 hrs) (+25 in., 10 to 18 cps) (86's, 18 to 2000 cps) Acceleration (106's, all axes) This unit replaced by 87-44900-355 for the remaining effectivities.	
	onal BY	0 th	
	CRIT COMP		
	TOR SECOND		-
	ENGE > ~		\dashv
ĸ	NOMENCLATURE	Switch, Pressure, Booster Cut-off, L02 Tank (11.0 psid)	
SUMMARY	KPPECTIVITY	100D	
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	A7-44900-374	

	SCHED	1960	
	TEST SCHED		
ABORT SENSING AND IMPLEMENTATION	REMARKS	This item is a modified commercial part. It is approved based on similarity to the -354 (P-20-1) unit except for a pressure setting of 2.5 psid instead of 4.0 psid. All six -354 units passed evaluation tests performed at (BD/A per 274419, dated 9-1-60. The following tests were performed: Temperature (-65° F, 2 hrs) (-25 in., 10 to 18 cps) (-25 in., 10 to 18 cps) Acceleration (86°s, 19 to 2000 cps) Acceleration (10 6°s, all axes)	
	SOVE BY	B0 S	
	CRIT COMP		
	INSTE		
	ENGR SE		
SUMMARY	NOMENCLATURE	Switch, Pressure, Propellant Differential (2.5 psid)	
	EPFECTIVITY	77D 88D 93D 100D 103D 103D 113D 152D 167D	
MERCURY TEST SI	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	82-44900-496 Servonic Instru- Bents P-20-4 84-4400-496	

	028	OMPL	Sept.
	TEST SCHED	START COMPL	The state of the s
ABORT SENSING AND IMPLEMENTATION		REMARKS	This item is a modified commercial part. Six units were evaluation tested at GD/A per 274419, dated 9-1-60. The following tests were performed: [-65°F, 2 hrs] Vibration (.25in., 10 to 18 cps) (-6k, 18 to 2000 cps) Acceleration(10g, all axes) NOTE Two of the six units failed in test. One unit exhibited intermittant high resist- ance and broke contact between 5 to 15 psi. The unit was repaired and retested but did not operate properly. The second unit shifted to 28 psid at -65°F and remained at this point when back at ambient. The unit was repaired and then successfully tested. Search for critical weakness tests have been completed. 1,000 hour life test was completed 9-29-61. Component was successfully open-loop tested on 88B. This part replaces 87-44900-372, due to
Y	T BX	νnδ	0 th
		сиз	
	APPB	20 I	
	3 K 8	БИС	
		NOMENCLATURE	Switch, Pressure, 102 Tank (Tlage (21.5 psid) qCDI
SUMMARY	ECLINITY	KF F	930
MERCURY TEST SI	PART NUMBER SPEC CONTROL PROC SPEC	VENDOR P/N	### ### ##############################

		T	
	TEST SCHED	ete 1961	
	1 30	Co由p	
	TEST		
ABORT SENSING AND IMPLEMENTATION	S WALKS	This item is a modified commercial part. All three units successfully passed evaluation tests performed at GD/A per 27A419, dated 9-1-h0. The following tests were performed: Temperature (-65°F, 2 hrs) Vibration (.25 in., 10 to 18 cps) (8g, 18 to 2000 cpa) Acceleration (10g, all exes) Search for critical weakness test have been completed. 1,000 hour life test was completed 9-24-61. Component was successfully open-loop tested on 88b This part replaces 87-44900-574 due to increased reliability level.	
	ual st	o th	
	RIT COMP		
	I MYON		
	DE PER SENCE		
X	NOMENCLATURE	Switch, Pressure, Booster Cutoff, LO2 Tank (11.0 psid)	4CD1
SUMMARY	EFFCTIVITY	171 1030 1030 1070 1090 1130 1300 1520 1670	
MERCURY TEST	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	87-11900-555 	

	TEST SCHEDULE START COMPL	Comi	
ABORT SENSING AND IMPLEMENTATION	R R R R S	Approved based on similarity to 87-44900-356. This switch is the same as, and replaces, the -556. The -854 is calibrated at 19.5 psid. The change was made when results of 93D were analyzed. It was found that LO ₂ tank ullage pressure was approximately 22.5 psid a few seconds after launch. A one pound tolerance for an abort condition is not sufficient.	
	QUALIFIED BY	BOS	
	NOMENCLATURE	Switch, Pressure, LO ₂ Tank Ullage (19.5 psid)	
SUMMARY	EFFECTIVITY	77D 103D 107D 109D 113D 130D 144D 152D 167D	
MERCURY TEST SUM	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME YENDOR PN	87-44900-584 Servonic Instruments, Inc.	

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MERCURY MAJOR CRITICAL COMPONENTS AUTOPILOT

None of the items in the Autopilot section require further approval action prior to flight. FPT tests on the gyro rate and displacement group and the remote rate group have been completed and the preproduction test is in progress. These assemblies contain gyros with spin motor rotation detectors. Preproduction testing on the new displacement gyros is complete. Flight proof tests are complete on the new rate gyro; the life test portion of the preproduction test is being rerun.

The alternate vendor for 27-04204-1, 27-04205-1, 27-04208-1, 27-04209-1 and 27-04211-1 have been eliminated as sources for these items; therefore, these items have been removed from this report.

	G H G	COMPL	1 9 9 0 0 1 1 M t	
	TEST SCHED	START COMPL	Comp 1	
AUTOPILOT		REMARKS	This unit was tested to 7-00209B requirements per GD/A report number 27A150 dated 3-12-60.	
	VI BL	vnd	T44	
	T COMP			
	A MAN	(0.1) 2011		
	7 2 85	MZ DNZ		
		NOMENCLATURE	Gyrosco Bent	QCD1
SUMMARY	PECTIVITY	ELI	100D	
MERCURY TEST SU	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	VENDOR P/N	7-04250-1 7-04250 g 7-04250 g 7	

Astronautics Form A2497 (5-61)

	CHED	1961 1961	
	TEST SCHED	Completed Dec. 1961	
AUTOPILOT	REVARES	This gyro contains spin motor retation detectors. Testing was performed by GD/A on test number 27A955. The flight proof testing are complete and the report is in the approval cycle.	
	bayr ba	Lidd	
	CRIT COMP		
	A TIENI		コ
	TOTAL SERVICES		\dashv
	NOMENCLATURE	Displacement Gyro, Autopilot	
SUKKARY	EFFCTIVITY	1050 1050 1070 1070 1130 1300 1440 1670	
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME VENDOR P	7-04250-3 7-04250G 27-04590 Kearfott Corp. C70250600	

AUTOPILOT	ST	COMPL Pte May		
	TEST	Complete Ma		
AUTOPILOT		(10-61) (12-61)	which was preproduction tested. The $27-04250-1$ was tested to $7-00209B$ requirements per $\mathrm{GD/A}$ test report Number $27A150$.	
	UALIFIED BY	BOS		
		NOMENCLATURE Gyroscope - Displacement		
SUMMARY	EFFECTIVITY	88D		
MERCURY TEST SUM	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	7-04250-5 7-04250G	Kearfott Corp T2506-2A	

	CHED	Fe to 1959	
	TEST SCHED	d e	
AUTOPILOT	REMARKS	(5-61) One 27-04204-1 unit was tested to Speci- fication 27-04216F by Crescent Corp. and test results reported in Test Report 25- 220, dated 12-58. Autopilot design group approved the 27-04204-1 tests on VAF MC 25 668, dated 2-27-59. (11-61) Eight specimens were subjected to search- for-critical-weakness tests and no failures were experienced. However, slight out- of-tolerance conditions were noted in all specimens.	
	duvr bx		
	CRIT COMP		
	TONE PER LINEAR PROPERTY AND A PROPERTY OF THE PER LINEAR PROPERTY OF THE P		
}	ENGB & K		
	NOMENCLATURE	Transducer-Feedback, Linear	qcpi
SUMMARY	KPPECTIVITY	77D 88D 93D 100D 103D 107D 113D 130D 144D 152D 167D	
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	27-04204-1 27-04204E 27-04216F Crescent Corp. HC-65-P-4E	

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		COMPL	1958 1958	
		START COMPL	Completed July 1958	
TOTTATOV		REMARKS	The 27-04205-1 unit (Crescent Corp.) was approved based on similarity to 7-04214 (BC44-4E) and 7-04215 (Crescent HC65-4E) and test report on 7-04242-1 (Crescent HC25-207) test report E-333. The 27-04205-1 was electrically similar to 7-04214 and 7-04215 and mechanically similar to 7-04224 and 7-04225. Autopilot design group approved the 27-04205-1 based on similarity on VAF MC 17,120, dated 7-3-58.	
	' BI	puar	BOS	
	COKE			
	3 5	INSL		
-	7 2	ENCE		
		NOMENCLATURE	Transducer-Feedback, Linear	qcD1
SULVARY	CTIVITY	KPP	17D 88D 100D 100D 100D 100D 113D 113D 152D 167D 167D	
MERCURY TEST S		VENDOR NAME VENDOR P/N	27-04205. 27-04205D 27-04213D Crescent Corp. HC-106-4E	

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	Q	MPL	e ted Dec. 1958							
	TEST SCHED	START COMPL	Completed Dec.				··			
T	TES	STA	0 00				-	<u> </u>	······································	
AUFUPILOT		REMARKS	(5-61) One 27-04206-1 unit was tested to specification 27-04218A by Sterer Corp. and reported in test report 13000.	Autopilot design group approved the 27-04206-1 on VAF MC 22873, dated 12-1-58.	(11-61)	Specification was revised to D revision. The specification revisions require more severe fluid temperature and proof cycle tests.	Ten specimens were subjected to search-for critical-weakness tests and no failures were experienced. However, slight out-of-tolerance conditions were noted in all specimens.	The fluid temperatures experienced during the third level of the search-for-critical-weakness tests are in excess of the revised (Revision D) requirements for the 27-04206-1 valve.		
	Vr Bi	'nò	PPT				-,			
	IT COMP			-					_	
	TIS TIS	I D I D EN								
J	71 40	NOMENCLATURE	Valve-Flow, Limiter, Hydraulic							ųCDI
SUMMARY	PECTIVITY	EL.	77D 88D 93D 100D	103D 107D 109D	1300	152D 167D				
MERCURY TRST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	VENDOR P/N	27-04206-1 27-04206C 27-04218D Sterer	13000						

	TEST	•	
	SCHE		
AUTOPILOT		The 27-04208-1 unit was approved based on similarity to GD/A 7-08369-1 as reported in Burst and Qualification Test Report CG 6-20. Autopilot design group approved the 27-04208-1, based on similarity to 7-08369-1 on VAF MC 37275, dated 9-3-59. [11-6]) Specification was revised to G revision which incorporates higher temperature requirements. The 27-04208-1 servo valve has performed satisfactorily at temperatures in excess of the revised temperature requirements during searchfor-critical-weakness tests.	
	OUALIFIED BY	BOS	
SUBBART	EFFECTIVITY	77D Valve - Servo, 88D Electro-Hydraulic 93D Sustainer 0.100D 103D 113D 113D 144D 152D 167U	QCDI
MERCURY LEST SOM	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	27-04208-1 27-04208D 27-04215G Cadillac Gage Co FC26-398A	

	Ð	MPL	e te Nov. 1958	
	TEST SCHED	START COMPL	Nov 1950	
	TES	STA	CO B D	
AUTOPILOT		REMARKS	The 27-04209-1 valve was approved on basis of similarity to 7-08353-3 which was preproduction tested. The 7-08353-3 valve was tested by Cadillac and reported in test Number CG 6-19. Report was approved on VAF MC 21969, dated 11-13-58. Autopilot design group approved the 27-04209-1 valve on VAF's MC 21971 and MC 21969, dated 11-1-58. (11-61) Specification was revised to H revision, which incorporates higher temperature requirements. The 27-04209-1 servo valve has performed satisfactorily at temperatures in excess of the revised temperature requirements	
	VE BY	ωø	BOS	
	II COMP	- 1		
	KAD APPE	II		
X		NOMENCLATURE	Valve - Servo, Electro-Hydraulic	1000
SUMMARY	PECTIVITY	431	98D 98D 100D 100D 103D 104D 113D 152D 152D 152D	
MERCURY TEST S		VENDOR P/N	27-04209D 27-04212H Cadillac Gage FC-26-397A	

	8 4	D . 00	
	SCAT	Jeted 1959 1959	
	TEST 3CARD	d ■ o o	
AUTOPILOT	REMARKS	The 27-04211-1 unit was tested to specification 27-04217D by Crescent Corp. and reported in Test Report 25-221. Autopilot design group approved the 27-04211-1 unit on VAF MC 25,074, dated 1-8-59. (11-61) Specification was revised to H revision. The significant revision to the specification was the addition of MIL-I-26600 requirement for RF noise testing.	
	QUAL BY	는 실 라	
	CRIT COMP		
	TACSING		
	IDE LENGE		
Y	NOMENCLATURE	Transducer Feedback, Linear	qcdi
SUMMARY	EPPECTIVITY	77D 88D 93D 100D 103D 103D 113D 113D 152D 167D	
MERCURY TEST SU	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME VENDOR P/N	27-04211-1 27-04211E 27-04211E Crescent Corp. HC-67P-4E	

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	TEST SCHOOL	START COMPL	ଦ ଅ ବ ଅ ସ ଅ
AUTOPILOT		REMARKS	This unit replaces 27-41709. Testing by GD/A on Test number 27A906 is complete. The report was reviewed and approved, but has since been diaspproved. This unit has been replaced by 27-04574-1 and no additional testing is planned.
	VT BX	nd	E a
	II COMP		
	7115	(LT)	
	7 7 80	NE.	
		HOMENCLATURE	Rate Gyre, Autopilot
SUMARY	PECTIVITY	4	388 0 0 0 0
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	VENTOR P/N	27-04301-1 27-04301-1 27-043010 27-043010 28-1 114 114 114 114 114 114 114 114 114 1

SUMARY
ECTIVITY
NOMENCLATURE C
77D Rate Gyro, Autopilot
103D 107D
113D 130D
144D 152D 167D
qcDI

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		Sept. 1960
	TEST SCHED	d # o
		, i
AUTOPILOT	S.M. V. M.	Approved based on similarity to the 27-41000-807 unit, which was flight proof tested on GD/A test number 7A2247, and the 27-41000-813 unit which was preproduction tested on GD/A test number 27A766, dated 9-28-60. Some deviations to MIL-I-26600 requirements were approved. Reference ECP No. CAC-107A-334-59 and CCN No. 532 and 206.) Differences between the units tested and the 27-41000-841 consist of gain and filter changes and incorporation of components with increased reliability.
	OAL BY	BOS
	BIT COMP	
	SE TIEN	
	MGB GE	
J	KOMENCLATURE	Servo Amplifier - Filter
SUMMARY	ELECTIALLY	109D
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	27-41000-841 GD/A

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	TEST SCHID	START COMPL	Do Co
	- Mi 9-	3T.	Ö
AUTOPILOT		REGARKS	Approved based or similarity to the 27-4100C-807 unit, which, flight proof tested on GD/A test number 7A2247, and the 27-41000-813 unit, which was preproduction tested on GD/A test number 27-4566, dated 9-28-60. Some deviations to MIL-1-26600 requirements were approved. Keference ECP No. CAC-107A-334-59 and CCN No. 532 and 206.) Differences between the units tested and the 27-41000-843 unit consist of gain and filter changes and incorporation of components with increased reliability.
	VT BA	ωğ	BOS
	T COMP	4000	
	KAD APPE	KI (II)	
	3 2 8t	並	
		NOMENCLATURE	Servo Amplifier - Filter
SUMARY	PECTIVITY	1	103D 107D 113D 113D 130D 152D 167D
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	VENDOR P/N	27-41000-843 GD/A

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			1950 1959 1959	
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		START COLUE	[d B 0 2	
		8		
AUTOPILOT		REKAPKS	Approved based on similarity to the 27-41001-837 unit which was preproduction tested to 7-00209B requirements on 7A2248 dated 9-17-29. Some deviations to ML-1-26600 requirements were approved (Reference BCP No: CAC-107A-534-47 and CCN-532.) Approximately 90% of the changes from the -837 unit to the -935 unit consist of programming changes. The remaining changes consist of incorporation of different components such as transistors, and the addition of transient suppression diodes.	
	Ya	guar	\$0 €	
	COMP	TIAC		
 	1 1	TRNI		
	APPR .	IDE		
		ENCE		
J		NOMENCLATURE	Programmer - Electronic, Autopilot	qcdi
SUMMARY	CLIVITY	314	88D	
MERCURY TEST	PART NUMBER SPEC CONTROL PROC SPEC	VENDOR NAME VENDOR P/N	27-41001-935 	

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			9	0 4 0 0 4 0 4 0 0
		2	뮑	
	181	TEST ACHED	STARTCOMPL	Completed and the desired and
AUTOPILOT			REMARKS	Approved based on similarity to the 27-41001-837 unit, which was preproduction tested to 7-00209B requirements on 7A2248 dated 9-17-59. Some deviations to MIL-126600 requirements have been approved (Reference ECP. No: CAC-107A-334-47 and CCN-532.) Approximately 90% of the changes from the -837 unit to the -951 unit commist of programming changes. The remaining changes consist of incorporation of different components such as transistors, and the addition of transient suppression diodes.
	I	VI B	nd	SOG
	dM0	O TI	В	
	9.5	STL	NI	
	NATA CAN	85	NE I	
			NOMENCLATURE	Programmer- Electronic, Autopilot
SUMMARY	TTIAI	PECT	A	930
MERCURY TEST S	PART NUMBER SPEC CONTROL		VENDOR P/N	27-41001-951

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	TEST SCHED	e te 1959 1959
	7 8C	o C
	TES	Complete Sep 195
AUTOPILOT	REMARKS	Approved based on simil_rity to the 27-41001-837 unit, which was preproduction tested to 7-00209B requirements on 7A2248 dated 9-17-59. Some deviations to MIL_I-26600 requirements were approved. (Reference ECP No. CAC-107A-334-47 and CCN 532. Approximately 90% of the changes from the -837 unit to the -967 unit consist of programming changes. The remaining change consist of incorporation of different components such as transistors and the addition of transient suppression diodes.
	QUAL BY	BOS
	CRIT COMP	
Ì	TISKI	
	TOR SER	•
	NOMENCLATURE	Programmer - Electronic
SUMMARY	EPPECTIVITY	107D 109D 113D
MERCURY TEST	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	27-41001-967

CBIT COMP TOBE	7 60/10
BOS	1
41001-837 unit, which was preproduction tested to 7-00209B requirements on 7A22 dated 9-17-59. Some deviations to MIL-26600 requirements were approved. (Reference ECP No. CAC-107A-534-77 and CCN 532.)	
Approximately 90% of the changes from the -837 unit to the -969 unit consist of programming changes. The remaining changes consist of incorporation of different components such as transistors and the addition of transient suppression diodes.	

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	1 1 1	1962	
	SCE CO		
	TEST SCHED	Prog.	
AUTOPILOT	REMARKS	To be approved based on similarity to 27-45202-801, which will be preproduction tested for E series missiles. The assembly contains gyros with spin motor rotation detectors. Testing on the 27-45202-801 is in process. Flight proof testing is complete, and preproduction testing is scheduled for February 1962 completion. (1-62) Differences between the 27-45202-801 and 27-41002-859 are due to different payload and trajectory characteristics.	
	oner by	BOS	
	CRIT COMP		
	INSLIT IN SECTION OF S		
	NOMENCLATURE	Gyroscope Group, Rate and Displacement	QCDI
SUMMARY	KPPECTIVITY	93D 109D	
MERCURY TEST SI	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	27-41002-859 GD/A	

	6	1	.00
	SCE	COMPL	1962.
1	TEST SCHED	START	Prog.
AUTOPILOT	B-	REMARKS	Approval to be based on similarity to 27-45202-801, which will be preproduction tested for E series missiles. The assembly contains gyros with spin motor rotation detectors. Testing on the 27-45202-801 is in progress. Flight proof testing is complete, and preproduction testing is scheduled for February 1962 completion. (1-62) Differences between the 27-45202-801 and 27-41002-859 are due to different payload and trajectory characteristics. The 1881 replaced the -859 because of wiring and gain changes. Ref. ECP 933.
	r BX	ινυδ	DOS C TO TENT O C TO TENT O C TO
	T COMP	CHI	
	E ha	IDE	
	MAP R	ENC	
X		NOMENCLATURE	Gyroscope Group - Rate and Displacement
SUMARY	RCTIVITY	1933	1030 1070 1130 1300 1440 1520 1670
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC	VENDOR NAME VENDOR P/N	27-41002-881

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	TEST SCHED	START COMPL	red red		
	TEST	STAR	Requ		
AUTOPILOT		(5-41)	This assembly is not tested at this level, it is a part of the gyroscope groups 27-45302-1, 27-45302-803, and 27-41002-859.	Special developed vendor items in this assembly are subject to test.	
	NE BY	19 6			
	III COMP				
	AP RESIDENCE				
	≥ ≤ 801	(r			-
		Power Group -	Gyroscope, Autopilot		qcdi
SUMMARY	PECTIVITY	77.0	88D 93D 100D 103D	1130 1300 1440 1520 1670	
MERCURY TEST S		VENDOR P/N	GD / A GD / A		27-41330

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	<u> </u>	4.6
	TEST SCHED	Begu red
	TES	
AUTOPILOT		This assembly is not tested at this level, it is a part of the gyroscope groups 27-45302-1 and -803. Special developed vendor components in this assembly, such as the gyros, are subject to test.
	OVE BY	OTH
	BIT COMP	3
	MGB APRO	
	NGB & K	
		Gyroscope Group - Displacement, Autopilot
SUMMARY	PPECTIVITY	100D
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	27-41331-5 Gb/A

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	CRED	COMPL	ក្ន ម
	TEST SCHED	START COMPL	Required
AUTOPILOT		REMARKS	This assembly is not tested at this level it is a part of the gyroscope group 27-41002-859. Special developed vendor components in this assembly, such as the gyros, are subject to test.
	VI BX	nò	0 th
	IT COMP		
	AP B AP B S S S S S S S S S S S S S S S S S S	ID	
	حا م	NA	
		NOMENCLATURE	Gyroscope Group - Displacement, Autopilot
SUMMARY	PECTIVITY	Æ	93D 103D 107D 107D 113D 130D 144D 152D 167D
MERCURY TEST ST	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	VENDOR P/N	27-41331-803 GD/A

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	8CH	3	o o z e	
	TEST SCHED	START COMPL	Requi	l
AUTOPILOT	F	REMARKS	This assembly is not tested at this level, it is a part of the gyroscope groups 27-45302-1 and -803. Special developed vender components in this assembly, such as the gyros, are subject to test.	
	IT BL	onv	H 10	
	T COMP	CBI		1
	713	SNI		1
	APP A	ONE		1
		NOMENCLATURE	Gyroscope Group - Rate, Autopilot	
SUMARY	PECTIVITY	i AT	1000	
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	VENDOR P/N	27-41332	

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	SCHED COMPL	ired
	TEST SCHED	Not Requ
AUTOPILOT	REMARKS	This assembly is not tested at this level it is a part of the gyroscope group 27-41002-859. Special developed vendor components in this assembly, such as the gyros, are subject to test.
	gual by	0 th
	CRIT COMP	
	ENGE CENT	
	ENGB E K	
X	NOMENCLATURE	Gyroscope Group - Rate, Autopilot
SUMARY	EPPECTIVITY	177D 93D 103D 107D 109D 113D 130D 144D 152D 167D
MERCURY TEST	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME VENDOR P/N	27-41332-811 GD/A

	TEST SCHED	Required Not
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	TES	Requ
		t this
	II.	this scop
		d at this gyroscope tems in the st.
		he gy he gy test.
		tested at f the gyrddors items to test.
TO	040	teste of the of the indors in to test
AUTOPILO"	O A G V MAG	is not a part of 2-1. subject
AU	P	a part old a part old
		bly fis 6 5300 fire 1 cre
		This assembly is not tested at level, it is a part of the gyrogroup 27-45302-1. Special developed vendors items assembly are subject to test.
		1) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
}		This a level, group group Specia assemb
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	OVE BY	OTH
	BIT COMP	
	S S SON	1
	AGE AGE	
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	, <u>p</u>	Supply Compodyro Gyro Group Gyro Group
		Amplifier, Gyro Group
		Ampliy Gyro
	ž	Power + 30 V.,
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ARY	PPECTIVITY	100Ω
SULLARY	A THI TOUGH	01
	, M.Z	
TR	EBO]	s s
MERCURY TEST	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	27-41333-5 GD/A
핑	LRT NU SPEC C PROC VEND	14 4 8 1 8 1 8 1 8 1 8 1 8 1 8 1 8 1 8 1
8		
MER	SP	GD/A GD/A

	CHEO	red red
	TEST SCHED	Not Required
AUTOPILOT		This assembly is not tested at this level, it is a part of the gyroscope group 27-45302-803. Special developed vendor items in this assembly are subject to test.
	IVI BL	9 0 th
[SIT COMP	
	MGB A KA	
	ACB S K	a
X		Power Supply Component Amplifier, +30v, Gyro Group
SUMMARY	PPECTIVITY	1 88 80
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	27-41333-801

MERCURY TEST S	SUMMARY	A				AUTUPILOT		
PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	PPECTIVITY		DK SE	BIT COMP	UAL BY		CHEST SCHED	CHED
27-41333-805	77D 93D 103D 107D 113D 130D 144D 152D 167D	Power Supply Component - Amplifier, + 30V., Gyro Group	<u> </u>		g TO	ted at this level tope group, which luction testing. s items in this test.	Not Required	re d
		qcdi						
	, a							

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	TEST SCHED	May 1960	13.20
	TEST SCHED	Comp	
AUTOPILOT	REVARKS	Approved based on similarity to -3 assembly, which was preproduction tested on GD/A test number 7A2334, dated 5-21-60.	
	pual by	BOS	
	CRIT COMP		ŀ
	S E ROI		1
	IDE PAR		1
إ	NOMENCLATURE	Control Group - Autopilot, Rate Gyro	
SUMARY	EFFCTIVITY	100D	
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	\$\frac{9}{1} \\ \frac{1}{1} \\ \frac{1} \\ \f	

MERCURY TEST S	SUMMARY			AUTOPILOT		
PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	EFFECTIVITY		DUALIFIED BY		TEST	E
27-41703-809	77D 93D 103D 107D 113D 113D 144D 152D 167D	Control Group - Autopilot, Rate Gyro	Ed d	(6-61) This assembly contains gyros with spin motor rotation detectors. Testing is to be performed by GD/A on test number 27-Al255. FPT is complete.	In I Prog.	Feb. 1962
		qcDI				

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S 5	1 9 9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	13-31
TEST SCHED	G C	
RECARKS	Approved based on similarity to the 27-41000-807 unit which was flight proof tested on GD/A test number 7A2247, and the 27-41000-813 unit which was preproduction tested on test number 27A766 dated 9-28-60. Some deviations to MIL-I-26600 requirements were approved. (Reference ECP No. CAC-107A-334-59 and CCN-532.) The 27-45300-3 unit differs from the tested units only in gain and filter changes.	
gual by	S S	
GRIT COMP		
P TISKI		1
ENGB SE		1
NOMENCLATURE	Servo Amplifier-	Astronautics Form A2407 (5-51)
EPPECTIVITY	1000	ca For
PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	£ 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Astronauti
	AND APPR APPR AND APPR AND APPR AND APPR AND APPR AND APPR AND APPR AND APPR AND APPR AND APPR APPR APPR APPR APPR APPR APPR APP	PROC SPEC. INTEREST CONTRACTOR AND SERVE AND S

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		S o t o o o o o o o o o o o o o o o o o
	TEST SCHED	Q B
AUTOPILOT		Approved based on similarity to the 27-41000-807 unit which was flight proof tested on GD/A test number 7A2247, and the 27-41000-813 unit which was preproduction tested on GD/A test number 27A766 dated 9-28-60. Some deviations to MIL-I-26630 requirements were approved. (Reference ECP. No. CAC-107A-334-59 and CCN No. 532 and 206. Differences between the units tested and the 27-45500-801 consist of gain and filter changes.
	OVE BY	BOS
	BIT COMP	
	SE TO	
	TO THE PART OF THE	
J	MALLANTON	Servo Amplifier- Filter
SUMMARY	PPECTIVITY	93D
MERCURY TRST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	27-45300-801

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		TEST SCHED START COMPL	Completed	1 6 2 6 2 6 2 6 6 6 6 6 6 6 6 6 6 6 6 6
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		ST	၁	
AUTOPILOT		REMARKS	((61)	Approved based on similarity to the 27-41001-837 unit, which was preproduction tested to 7-00209B requirements on GD/A test number 7A2248, dated 9-17-59. Some deviations to MIL-I-26600 requirements were approved. (Reference ECP No. CAC-107A-534-47.) Approximately 90% of the changes from the 27-41000-837 to the 27-45301-3 consist of programming changes. The remaining changes consist of incorporation of different components such as transistors and the addition of transistors and the addition of transistors and the addition of transient suppression diodes.
	BY	τ ν Ωδ	BOS	
	COMP	TIRO		
	9	ILSNI		
	MAD	I DE Ence		
		UDINE		
J		NOMENCLATURE	Programmer - Electronic. Automilet	
SUMMARY	YTIVIT	KPFEC	100D	
MERCURY TEST S	PART NUMBER SPEC CONTROL	VENDOR PANE	27-45301-3	- V q

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TEST SCHED CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL AUTOPICO Autopilot Autopilot Autopilot Approved based on similarity to the June Completed Approved based on similarity to the June Approved based on similarity	NOW PROLATOR ADDRESS (6-61) Autopilot Approved deviations consist of storage at 1-4PP instead of -65-P and operating acceleration test vith spin motore disconnected. Connected. Approved deviations consist of storage at 4PP instead of -65-P and operating acceleration test vith spin motore disconnected. Connected. Connected. Connected. Connected. Connected. Connected. Consist of control. Are used only for ASIS instrumentation. A remote rate Gyro group was added for control.	MERCURY TEST SI	SUMMARY				AUTOPILOT			
NOMENCIATURE (6-61) 100D Gyroscope Group - B0S (6-61) Autopilot Autopilot Coup - Production tested to 7-00209B per test report 7A2246 dated 6-7-60. Approved deviations consist of storage at -4°F instead of -55°F, and operating acceleration test with spin meters disconnected. Changes from the 27-41002-805 to the Changes from the 27-41002-805 to the add operating and again changes. The rate gyros are not used for control, but are used only for ASIS instrumentation. A remote rate gyro group was added for control.	NOMENCIATURE (G-61) 100D Gyroscope Group - B0S (6-61) Approved based on similarity to the 27-41002-805 assembly which was preport TA2246 dated 6-7-60. Approved deviations consist of storage at -4°F instead of -65°F, and operating acceleration test with spin motors disconnected. Changes from the 27-41002-805 to the 27-45302-1 unit consist only of wiring and gain changes. The rate syros are not used for control, but are used only for NSS instrumentation. A remote rate gyros group was added for control.	NUMBER CONTROL C SPEC	KTIVITY			Te u				
Approved based on similarity to the 27-41002-805 assembly which was preproduction tested to 7-00209B per test report 7A2246 dated 6-7-60. Approved deviations consist of storage at -9F instead of -65F, and operating acceleration test with apin motors disconnected. Changes from the 27-41002-805 to the 27-45302-1 unit consist only of wiring and gain changes. The rate grow are not used for control, but are used only for ASIS instrumentation. A remote rate gyro group was added for control.	Autopilot Autopilot Autopilot Autopilot Autopilot Autopilot Autopilot Autopilot Autopilot Autopilot Autopilot Autopilot Approved based on similarity to the Approved by the bigh was pre- production tessed to 7-00298 per test report 7A2246 dated 6-7-60. Approved datiations consist of storage at -4°P instead of -65°P, and operating acceleration test with spin meters dis- connected. Changes from the 27-41002-805 to the 27-45302-1 unit consist only of wiring and gain changes. The rate gross are not used for control, but are used only for ASIS instrumentation. A remote rate gyro group was added for control.	NDOR NAME ENDOR P/N	112	101	1	ι ν υδ		START	COMPL	
ort 7A2246 dated 6-7-60. browed deviations consist of stop-4°F instead of -65°F, and operateleration test with spin motors inceted. inges from the 27-4100 2-805 to 45302-1 unit consist only of wing gain changes. The rate gyros is used for control, but are used a ASIS instrumentation. A remotor of group was added for control.	ort 7A2246 dated 6-7-60. browed deviations consist of stop-4°F instead of -65°F, and operateleration test with spin motors neected. inges from the 27-4100 2-805 to response of the consist only of wing gain changes. The rate gyros of gain changes. The rate gyros of a seed for control, but are used to a seed for control, but are used to a second of control. ASIS instrumentation. A remotor of group was added for control.	5302-1	1000			808 S	(6-61) Approved based on similarity to the 27-41002-805 assembly which was preproduction tested to 7-00209B per test	Co B D	eted June 1960	
ges from the 27-4100 2-805 to based and consist only of with gain changes. The rate gyros ased for control, but are used ASIS instrumentation. A remotegroup was added for control.	ges from the 27-4100 2-805 to biggain changes. The rate gyros ased for control, but are used 4SIS instrumentation. A remotegroup was added for control.						oort (A2246 dated 6-7-60. broved deviations consist of stor-4°F instead of -65°F and operation test with spin motors inected.			
							ges from the 27-41002-805 to bigging the state gyros gain changes. The rate gyros gased for control, but are used ASIS instrumentation. A remotegroup was added for control.			

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	TEST SCHED	START COMP	Complete					
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	TES	STA	Co	_				
AUTOPIIOT		REVARKS	(10-61)	Approved based on similarity to the 27-41002-805 assembly, which was preproduction tested to 7-00209B per test report TA2246, dated 6-7-60.	Approved deviations consist of storage at -4°F instead of -65°F, and operating acceleration test with spin motors disconnected.	Changes from the 27-41002-805 to the 27-45302-805 unit consist only of wiring and gain changes. The rate gyros are not used for control, but are used only for ASIS instrumentation. A remote rate gyro group has been added for control.		
	IT BX	'nò	BOS					
	T COMP	СВЭ						
	9 2 71.5	IN						
		EN						
Y		NOMENCLATURE	Gyroscope Group- Rate and Disulacement					
SUMARY	PECTIVITY	an a	88D				· · · · · · · · · · · · · · · · · · ·	
MERCURY TEST	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	VENDOR P/N	27-45302-803	D/A				

MERCURY

MAJOR CRITICAL COMPONENTS

SEPARATION

None of the items in the Separation System require further approval action prior to flight.

	CHC	COMPL Nov. 1959	
i	TEST SCHED	Completed Nov. 1959	
SEPARATION		This item is similar to the -1 units which were tested to 7-00209B requirements by GD/A on 7-2245, dated 9-30-59. All 20 units tested met the requirements. The change revising the -1 assembly to a -3 assembly consisted of the addition of an "O" ring retainer.	
	VF BX	BOS BOS	
	IT COMP		
	APPE APPE MAR		
	Z Z 80		
, i		Valve Assembly, Explosive	qcD1
STYMARY	PECTIVITY	77D 88D 93D 100D 103D 103D 113D 130D 144D 152D 167D	
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	VENDOR P/N 27-04304A 27-04309A Conax Corporation 2790A	

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SEPARATION		
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	REMARKS	
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	NOMENCLATURE	Separation
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		F 1 авк,
ARY	EFFECTIVITY	
SUMMARY	A THI TO CALLED	
TEST	IKE N	
YTI	ART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME VENDOR P/N	7
MERCURY	NUM C CO S CO ENDO	ທ ປະ ທ
KE	PART NUMBER SPEC CONTR PROC SPEC VENDOR N	77-08575
		7/=UN5/5

		HED I	April 1959	
	ı	TEST SCHED START COMPL	Co B J	
	<u></u>	TES	Ŭ	
SEPARATION		REMARKS	Twenty units were subjected to requirements of 7-00209B by CV/A in 7A1812 dated 4-10-59. As a result of corresion, four untreated and unlubricated fittings failed to operate after the enviromental tests. Two untreated but lubricated fittings operated even though corroded. The remaining units were treated with several different materials Although some corrosion was present, all the units operated satisfactorily. All production units are now being manufactured with a finish which prevents corrosion.	
į	BX	DONE	T4d	
	содь	TIRO		
Ì	KAD	INSLI		<u></u>
	73	ENCE		
		NOMENCLATURE	Fitting Assembly, First Stage Separation	ącpi
SUMMARY	XTIVIT:	EP P EC	77D 88D 93D 100D 103D 103D 113D 130D 144D 167D	
MERCURY TEST S	PART NUMBER SPEC CONTROL	VENDOR NAME VENDOR P/N	7-45435-3	

MERCURY

MAJOR CRITICAL COMPONENTS

ANTENNA

This section covers TLM/RSC, AZUSA, $MOD\ III\ guidance\ an$ tenna assemblies, TLM/RSC ring couplers and MOD III guidance wave guides.

Antennas and ring couplers have been tested and/or approved on the basis of similarity to qualified items.

ALUSA antenna is qualified on the basis of similarity to an antenna which was flight proof tested.

Standard VSWR measurement tests were performed on waveguide assemblies.

	A	7	70 07
	TEST SCHED	START COMPL	June 1957
	S.T. S	RT	Со в р
	i i	STA	o O
ANTENNA		REMARKS	Approved on the basis of similarity to 7-36044-1 which has been preproduction tested (Test Report 7A561, dated 6-3-57). RSC ring coupler has HN connectors and TLM ring coupler uses TN connectors.
	Vr BX	νnδ	ω
	II COMP	гио	
	177.6	INS	
	APPR 40	I DI	
		NOMENCLATURE	Ring Coupler, TLM
SUMMARY	PECTIVITY	KF	1000
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	VENDOR P/N	7-11500-3 (7-01203) GD A 7-11500-3

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		COMPL	June June 1957	
		START COMPL	Сопр	
AN1 ENNA		REMARKS	(5-61) Une specimen has been preproduction tested at GD/A (Test Report 7A561, dated 6-3-57).	
	ВХ	guar	PPT	
		TIAO		
	MAD APPR	I NELT		
	- 2	ENCE		
		NOMENCLATURE	Ring Coupler, RSC	ųcDI
SUMMARY	YTIVIT	RFFEC		
MERCURY TEST ST	PART NUMBER SPEC CONTROL PROC SPEC	VENDOR NAME VENDOR P/N	0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	7-36044

Astronautics Form A2497 (5-61)

	TEST SCHED	e t e d
	TEST SCHED	a Q
	TES	Сопр
ANTENNA	REMARKS	Approved on basis of similarity to 7-36044-1 which has been preproduction tested (test report 7A561). The -5 is the same as the -1, except for different covers and the addition of a shim between the base plate and cover.
	onyr by	E d
		
	CRIT COMP	
	TOR SEE	
SUMARY	NOMENCLATURE	Ring Coupler, RSC
	EPPECTIVITY	109D 113D 130D 144D 152D 167D
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME VENDOR P/N	7-36044-5

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	<u>Q</u>	MPL	प e
	301	r co	e t
	TEST SCHED	START COMPL	Completed
		ß	
ANTENNA		REMARKS	Two specimens have been preproduction tested at GD/A (Test Reports 7A1830, dated 6-20-59 and 7A2083, dated 6-29-59). NOTE: Both specimens developed cracks at four places between the double mounting holes. Failures were caused by an inadequate vibration fixture. The vibration fixture was modified on a third specimen and the specimen subjected to vibration tests. The specimen successfully passed the tests.
	VT BX	nd	L dd
		сві	
	AN AN AN AN AN AN AN AN AN AN AN AN AN A		
	AP ME	ENC	
X		NOMENCLATURE	Antenna Assembly, TLM/ RSC, (B-1 Pod)
SUMMARY	FECTIVITY	KP.	93D 93D 100D 103D 107D 103D 113D 152D 167D
MERCURY TEST	PART HUMBER SPEC CONTROL PROC SPEC VENDOR NAME	VENDOR P/N	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$

	<u>Q</u>	MPL	70 4)	
	TEST SCHED	STARTCOMPL	Completed	
	TES	STA		
ANTENNA		REMARKS	Approved on the basis of similarity to the unit which has been preproduction tested. Dash one and dash three are identica! electrically as well as mechanically. Dash one is used on Pod-1 and dash three is used on Pod-2.	
	Vr BX	'nò	BOS	
<u> </u>	T COMP	CRI		
	A TAN	I DI		
	≥ 2 E	NZ		
		NOMENCLATURE	TLM/RSC, (B-2 Pod)	QCDI
SUMARY	PECTIVITY	KL	930 930 1000 1030 1030 1030 1300 1300 13	
MERCURY TEST SU	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	VENDOR P/N	27-12507-3 	

Astronautics Form A2497 (5-61)

		TEST SCHED	Completed	
ANTENIA		REMARKS	Approved on the basis of similarity to 27-35022-3, which has been flight proof tested.	
	ВХ	duvr	BOS	
		TIAO		
	9 8	INSLI		
	APPB	ENCE		
X		NOMENCLATURE	Antenna / Azusa	qсрі
SUMMARY	YTIVIT	KPPEC	471 881 1001 1030 1030 1130 1300 1520 1670 1070	
MERCURY TEST S	PART NUMBER SPEC CONTROL	VENDOR PANE VENDOR PANE	27-35026-1 	

*

		ONDE	Sept.	
		START COMPL	C O B D	
ANTENNA		REMARKS	Approved on the basis of similarity to 27-36010-1 and 27-36006-1 which have been flight proof tested (Test Report numbers 274244, dated 10-11-60 and 7A2131, dated 9-6-60). Assembles into the 27-37005-1 assembly.	
	BX	JV D Ö	BOS	
	COME			
		I DE Ence		
Y	71.	NOMENCLATURE	Mod III Guidance	
SUMARY	CLIVITY	1143	77D 88D 93D 100D	
MERCURY TEST ST	PART NUMBER SPEC CONTROL PROC SPEC	VENDOR NAME VENDOR P/N	27-37000-1 	

Astronautics Form A2497 (5-61)

TEST START START Comp 1			0 1
to to		T SCE	plete Sept. 1960
REMARKS 1) ved on the basis of similarity to 010-1 and 27-36006-1 which have been t proof tested. (Test report number		STA	
(10-6 Appro 27-36 fligh	ANTENNA	REMARKS	basis of similarity 27-36006-1 which have sted. (Test report n 10-11-60 and 7A2131,
			<u> </u>
© 60AL BY	-	TASAT	
CRIT COMP		2 g 301	
TINSTE COMP	14	NOMENCLATURE	Antenna Assembly, MOD 111 Guidance
MAD APPB APPB INSTIT COMP INSTIT COMP Cuidance	SUMMAKI	EPPECTIVITY	109D
NOMENCLATURE RAPE APPR APPR APPR NOMENCLATURE RAPER CONTRIBUTE CON	MERCURI ISSI S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	27-37000-3 GD/A 27-37000-3

	HED HALL	e te 1960 1960
	TEST SCHED	Complete Sep 196.
	TES	
ANTENNA	REMARKS	Approved on the basis of similarity to 27-36010-1 and 27-36006-1 which have been flight proof tested (Test report numbers 2742444, dated 10-11-60 and 7A2131, dated 9-6-60). Assembles into the 27-37005-3 assembly. The -5 is the same as -3 except that window 27-36002-3 is replaced by 27-36002-1.
	onyr br	BOS
	CRIT COMP	
	TINITE LA PROPERTIES	
	ZNGB S K	
X	NOMENCLATURE	Antenna Assembly, MOD III Guidance
SUMMARY	EPPECTIVITY	103D 113D 130D 144D 152D 167D
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	27-37000-5 GD/A 27-37000-5

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	2) 22	t 0		
	NOMENCLATURE	Waveguide, Mod III Guidance (pulse beacon t antenna)		(
	E E	de, Gui bea na)	j	3
1	ON	aveguide, od III Guidanc (pulse beacon antenna)		167
١,				E SA
SUMMARY	EFFECTIVITY	1000		Astronautics Form A22.97 (5-61)
	, <u>M</u> z			autic
TEST	ART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME			tron
MERCURY	RT NUMBER PEC CONTRO PROC SPEC VENDOR N	382- 382-		As
N EB	PART NUMBER SPEC CONTER PROC SPEC VENDOR N	7 - 1 -1	27 22 22	
		01150	27-61382	

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	TEST SCHIED	Complete
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NA		testing testing or the
ANTENNA		ntal ntal
	0 h	was conducted environmental as -1 except -36217-7.
		Validation tess Radiation Lab. is required. The -3 is the addition of bo
		Validar Radiati is requ The -3 additi
	UAL BY	0 th
	HIT COMP	
	DE LE	
	9	MOD 1111 20n to
	NON	Waveguide, MOD Guidance (Pulse beacon antenna)
SUMMARY	PPECTIVITY	170 880 930 1030 1030 1130 1300 1520 1670
TEST S	B BOL	
MERCURY 1	ART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	·
MERC	PART N SPIEC PROC VEN	7-6138 7-6138
MERC	PART NUMBER SPEC CONTE. PROC SPEC VENDOR N	0 4 - 1 9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

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ANTENNA	TEST SCHED	Completed	
	O A CLANGE	(5-61) Validation testing has been conducted at GD/A Radiation Lab. No environmental testing is required.	
	NYF BX	0 th	
	RIT COMP		
	NGB PAR		1
SUMMARY	NGB V	Waveguide, Mod III Guidance (Transition)	
	PPECTIVITY	0	,
MERCURY TEST S	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	27-61383-1 GB/A 27-61383-1	

		TEST SCHED START COMPL	t e	
ANTENNA	TEST SCHED		Complete	
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			at GD/A testing or the	
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ANT	REMARKS		conducted ronmental except	
			was conducted environmental as -1 except.	
	8	(**************************************		
			test 1 ab. d. the s of bos	
			Validation testing was conducted radiation lab. No environmental is required. The -3 is the same as -1 except addition of boss 27-36217-7.	
			Valida radiat is req The -3 additi	
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		BNGD		
		RE	111	
		NOMENCLATURE	on)	QCD1
		OMEN	Guidance (Transition)	э́
		1	Waveguide, Guidance (Fransitio	
JRY TEST SUMMARY	YTIVI	KPFCT	938 930 1030 1030 1040 1130 1520 1520 1670	
	J.C.	ANB P/N		
	OMBER Contra	ROC SPEC VENDOR NAME VENDOR P/N		
MERCURY	PART NUMBER SPEC CONTROL	PROC VENI VEN		
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ANTENNA	TEST SCHED	Comp. eted	
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	REMARKS	Validation testing has been conducted at GD/A Radiation lab. No environmental testing is required.	
	onyr br	ч	
	CRIT COMP		
	INSLIT IN LEVEL IN LE		}
	ENGB & E		
MERCURY TEST SUMMARY	NOMENCLATURE	Wave Guide, Mod III Guidance (Structure to rate beacon) QCDI	letimonities form 12/07 (5.4.)
	KFFECTIVITY	77D 88D 93D 100D 103D 103D 113D 130D 152D 152D 152D	ica For
	PART NUMBER SPEC CONTROL PROC SPEC VENDOR NAME	27-61384-1 	Astronaut